Core samples of the Green River Formation from Equity Oil Company's Oldland Corehole 3 drilled in 1964 in NEI/4 sec 10, T 3 S, R 96 W 6th P.M., Rio Blanco County, Colorado

Surface elevation: 6456 feet

Sampled section: 1499 to 2395 feet

From	To	Description
1499.0	1508.0	Oil shale: medium to dark brownish gray and rare dark
		brown (10YR and 2.5Y 4/2-3/2; some 5/2 and 3/1, rare 3/3). Very faint smooth to slightly distorted laminations and some streaked bedding. Irregular to some slightly irregular thick parting; conchoidal to irregular fracture. Some small irregular tan to brown.
		earthy to crystalline lenses and streaks. Common small to medium irregular dark brownish gray to colorless crystalline lenses from 1500.7 to 1501.4 feet. Some small irregular brownish gray to black lenses and stringers with rare fine slightly iridescent crystals at 1502.9 and 1503.4 feet.
		Sample of brownish gray crystalline lens from
		1501.2 feet: X-ray - dawsonite, quartz, calcite. Sample of brownish gray to black stringer with rare fine iridescent crystals from 1502.9 feet:
1508.0	1510.0	X-ray - dawsonite, pyrite, calcite. Oil shale: medium to dark brownish gray (10YR 4/2-3/2,
		some 3/1, rare 5/2 and 2/2). Very faint and rare moderately distinct, slightly irregular and distorted laminations. Irregular thick parting; irregular to conchoidal fracture. Some small irregular tan to dark brown, crystalline and rare earthy lenses and streaks
1510.0	1513.5	with very rare pyrite. Oil shale: dark and very rare medium brownish gray
	•	(10YR 3/2-3/1, rare 4/2). Very faint slightly distorted laminations and streaked bedding. Irregular thick parting; conchoidal to irregular fracture. Rare tan to brown lenses and streaks in upper part. Rare
1513.5	1514.5	resinous streaks in middle and lower parts. Oil shale: dark brownish gray and rare brownish black (10YR 3/2 and 3/1-2/2, rare 1/2). Very faint smooth to slightly distorted laminations and streaked bedding. Irregular thick parting; conchoidal fracture. A thin dense brownish gray dolomite band with two short paral- lel vertical fractures with gilsonite-like fillings at 1513.9 feet.

^{1/} By L. G. Trudell

Illustration No. SER-3891P (Sheet 1 of 57)

Core samples from Equity Oil Company's Oldland Corehole 3--Continued

From	То	Description
1523.3	1525.3	Oil shale: dark brownish gray (10YR and 2.5Y 3/2-2/2);
		some satiny to resinous lusterespecially in lower
		part. Very faint smooth to some irregular distanted
	•	idminditions; common small to moderately large loss
		scructures and displacements. Slightly irregular to
		illegular, thick to some thin parting: irregular to
7 50 5 6		some nackly fracture.
1525.3	1526.3	Oil shale: dark and rare medium brownish gray to some
•		$\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$
		very rathe to faint smooth laminations. some wary small
		Tracellar 100p Structures and displacements Tracellar
	.4	thick to medium parting; conchoidal to irregular
		rracture. A thin dark brown to brownish-gray dolomito
1526.3	1527.5	pand near pase.
1720.3	1327.3	Oil shale: medium to dark brown and brownish gray
		(10YR and 2.5Y 4/3-2/2, rare 5/3). Moderately distinct
•		to very faint distorted laminations, stringers, and
•		streaks; common loop structures and displacements in
		upper half. Irregular to some slightly irregular thick
1527.5	1528.6	parting; conchoidal to fairly smooth fracture.
		Oil shale: dark and some medium brownish gray (10YR and
		2.5Y 3/2, some 4/2, rare 2/2); very rare fine satiny to resinous streaks. Very faint distorted streaks,
		stringers, and rare laminations. Irregular thick
		parting; irregular to conchoidal fracture. Some small
		irregular brown crystalline patches. Some small
1528.6	1532.5	Oil shale: dark brownish gray and rare brownish block
	4,	(IUIN 3/2-2/2, Tare 1/2); some sating to recipous
		streaks. Faint distorted streaked hedding Traccitor
		thick parting; irregular to conchoidal and rare coarse
	• •	mackly fracture. Some small tan to brown earthy to
		clystalline patches and streaks. Rare fine warm to
	•	vicieous plack organic streaks. Rare thin dones don't
1532.5	150/ 5	blown dolomite streaks and lenses in lower part.
1332.3	1534.5	our share: dark and some medium brownish gray (1000
		3/2-2/2, some 4/2). Very faint smooth laminations.
		common small loop structures and displacements Tr
	•	regular to slightly irregular thick parting; slightly
1534.5	1535.5	irregular to slightly conchoidal fracture. Oil shale: dark brownish gray (10VR 3/2-2/2)
		Faint smooth to slightly distorted laminations; very
		common small to medium loop structures and displacements. Trregular to slightly irregular to
		ments. Irregular to slightly irregular thick parting; irregular fracture. A very fine columnar marcasite (?)
		streak with some brown to black crystalline material at
		1535.2 feet (like Core BX-1, 1685.4 feet?).
	· .	1000.4 TEEF!

Illustration No. SBR-3891P (Sheet 3 of 57)

Core samples from Equity Oil Company's Oldland Corehole 3--Continued

From	То	Description
1545.4	1548.8	Oil shale: dark brownish gray (10YR 3/2-2/2); some
		satiny luster in lower part. Very faint smooth to
		slightly distorted laminations and rare streaked
		bedding; some loop structures in lower part. Irregular
		to slightly irregular thick parting; irregular to rare
		hackly fracture. Very rare very fine crystalline streaks.
1548.8	1549.9	
1340.0	1349.9	Oil shale: dark brownish gray to brownish black (10YR 2/2-1/2). Very faint slightly distorted to smooth
	•	laminations and streaked bedding. Irregular thick to
• • •		medium parting; irregular to rare coarse hackly fracture.
		Common fine brown crystalline streaks and lensessome
		with common pyrite.
	• .	Sample of shale with fine crystalline streaks from
1.		1549.4 feet:
	,	X-ray - pyrite; some quartz, dawsonite.
1549.9	1551.4	Oil shale: dark brownish gray and rare brownish black
		(10YR 3/2-2/2, rare 1/2). Very faint slightly dis-
•		torted to very smooth laminations. Irregular thick to
		medium parting; irregular to conchoidal and rare coarse
		hackly fracture. Very rare fine vitreous black organic
		streaks.
1551.4	1553.9	Oil shale: dark brownish gray (10YR 3/2, some 2/2). Very
		faint smooth to slightly distorted laminations; some
		very small loop structures and displacements. Irregular
-	and the second second	to some regular thick parting; slightly irregular to
•	*	slightly conchoidal fracture. Some very fine disseminated crystals.
1553.9	1555.3	Oil shale: dark brownish gray (10YR 3/2-2/2), some satiny
2333.3	200040	to resinous luster. Very faint smooth laminations to
		distorted streaks and stringers; some loop structures
	•	in upper part. Irregular thick parting; irregular fracture.
	•	Some thin buff lenses or inclusions in lower part.
1555.3	1556.4	Oil shale: medium to dark brownish gray (10YR and 2.5Y
	.4	4/2-3/2, rare 5/2). Faint distorted streaks, stringers,
		and rare laminations. Irregular thick parting; slightly
		irregular to conchoidal fracture. Some small irregular
	<u> </u>	buff to brown crystalline lenses and streaks.
1556.4	1559.4	Oil shale: dark to rare medium brownish gray and brown
		(10YR and 2.5Y 3/2 and 3/3-2/2, rare 4/2). Faint dis-
		torted streaks, stringers, and lenses. Irregular thick
		parting; irregular and rare hackly fracture. Some small
		irregular tan to brown crystalline lenses. Some small
.		irregular tan to buff marlstone inclusions in upper part

Illustration No. SBR-3891P (Sheet 5 of 57)

Core samples from Equity 0il Company's Oldland Corehole 3--Continued

From	То	Description
		parts. A 1/2-inch dense brownish gray dolomite band
•	* · ·	with short vertical fractures at 1567.9 feet. Rare
		fine crystalline streaks near base.
		Sample of almost neutral gray shale with very fine
		disseminated crystals from 1567.5 feet:
		X-ray - quartz; some dolomite, dawsonite, feldspar
1560.0	1-70 -	(Na and K), lilite, pyrite.
1569.0	1570.5	Ull shale: medium olive grav and brownish grav to
•		buil, late dark office grav and brown (5V 5/2 4/2
•		$21+2$ $4\cdot 2+214-414$. Some $612-112$: rare 10VD 112 0121
		Distinct to raint, smooth to distorted inminutions
		streaked bedding. Irregular thick parting, irregular
		co concholdal fracture. Common fine to rare medium
		dense gray to butf dolomite laminae streaks and lenger
		when some short vertical fractures Some constitutes
1570.5	1572 0	prown crystalline patches in dolomite poor been
1370.3	1573.8	Oll Shale: medium to dark brownish grave (1000 //2 242
		some 2/2, rate 3/1-2/1). Faint distorted etropled
		beduing. Very irregular to some slightly irregular
		thick parting; irregular to conchoidal fracture come
		small to moderately large irregular tan to buff dolorito
1573.8	1575.4	inclusions in lower part.
	2010.4	Oil shale: dark brownish gray (10YR 3/2-2/2, some 3/1-
		2/1). Faint to very faint, smooth to slightly irregular
	•	and distorted laminations; common fine to small loop
+2		structures in lower part. Irregular thick to medium
		parting; slightly conchoidal to irregular fracture.
		Very rare fine gray pyritic streaks. Some fine dense tan dolomite laminae and streaks 1574.8 feet.
1575.4	1576.4	Oil shale: dark and some medium brownish gray (10YR
	• ,	and 2.5Y 3/2-2/2, some 4/2). Faint to very faint dis-
	•	torted laminations and streaked bedding; some irregular
	•	loop structures and displacements. Irregular thick to
		medium patiting; irregular and rare backly fronting
1576.4	1578.9	our share: medium brownish gray and some brown to
		$\frac{1}{2}$ and $\frac{1}{2}$ and $\frac{1}{2}$ and $\frac{1}{2}$
		rate stight office tint). Very faint to rare distinct
		ratify smooth to distorted and displaced laminations
		and streaked bedding. Irregular to some regular thick
		Parting, illegular to slightly conchoided fracture
	•	Nate very small brown crystalline patches and streets
		in upper, part. Very rare small black plant fossile or
		parting surfaces.
***************************************	-	

Illustration No. SBR-3891P (Sheet 7 of 57)

Core samples from Equity Oil Company's Oldland Corehole 3--Continued

From	То	Description
1596.5	1600.0	Oil shale: dark brownish gray and some brownish black
		(10YR 3/2-2/2, some 1/2). Very faint fairly smooth to some very distorted streaks, stringers, and laminations.
		Slightly irregular to irregular thick parting; irregular to hackly fracture. Some very fine disseminated crystal
		and crystalline streaks; some small irregular tan to brownish black crystalline lenses in middle part (some
		very pyritic). Some irregular and displaced brown dolomite stringers and lenses at 1598.9 feet with fine
		irregular fractures with resinous brown to black coatings.
		Sample of rich oil shale with fine pyritic streaks from 1597.7 feet:
		X-ray - quartz, illite, Na-feldspar, pyrite, dawsonite, calcite.
1600.0	1603.0	Oil shale: dark brownish gray (10YR and 2.5Y 3/2-2/2 and 2/1). Very faint smooth to slightly distorted lamina-
		tions and streaked bedding. Irregular to some slightly
		irregular, thick to rare thin parting; conchoidal to irregular fracture. Very rare fine vitreous black streaks.
		Sample of very faintly bedded oil shale from 1600.8 feet:
		X-ray - quartz, dawsonite, dolomite, feldspar (Na and K), illite, pyrite.
1603.0	1607.3	Oil shale: dark to rare medium brownish gray and brown (10YR and 2.5Y 3/2 and 3/3-2/2, rare 4/2-5/3). Very
		faint to faint, fairly smooth to distorted streaked bedding and rare laminations. Irregular to slightly
•		irregular, thick to medium parting; slightly irregular
	•	to irregular fracture. Some to fairly common small irregular medium to dark brownish gray crystalline
	•	lenses (common acicular to bladed crystals). Rare small irregular brown to buff dolomite (?) lenses and stringers.
1607.3	1612.5	Oil shale: dark brownish gray to brownish black (10YR 2/2 and 2/1-1/2, some 3/2 upper part). Very faint
		smooth to slightly distorted laminations and streaked
		bedding. Irregular to slightly irregular, thick to medium parting; irregular to hackly fracture. Some to
		very common fine disseminated crystals and crystalline streaks; some small brown crystalline lenses with
	n Philippin and State of the St	radiating acicular crystals.

Illustration No. SBR-3891P (Sheet 9 of 57)

Core samples from Equity Oil Company's Oldland Corehole 3--Continued

1620.6 1622.9 0il shale: dark brownish gray (2.5Y 2/2-3/2). Very faint very smooth laminations and streaked bedding. Slightly irregular to regular, thick to thin shaly parting; slight hackly to conchoidal fracture. Common to rare fine crystalline streaks. 1622.9 1624.9 0il shale: dark and some medium brownish gray (2.5Y 3/2 and 3/1-2/2 and 2/1, some 4/1 lower part). Ver faint very smooth to some distorted and displaced laminations. Very regular to slightly irregular me to thin shaly parting; slight hackly fracture. Rar thin dense gray bands in lower part (like 1617.2 fe 0il shale: medium to dark brownish gray (10YR 4/1-3 and 3/2). Very faint smooth to rare distorted lamitions and streaked bedding. Very regular to slight irregular, thick to thin shaly parting; slight hack to irregular and some conchoidal fracture. Some medium to thin dense gray to brownish gray bands and rare thin irregular stringers. Sample of oil shale with very regular thin shaly parting from 1625.4 feet: X-ray - quartz, dawsonite, K-feldspar; some dolomite, pyrite, illite, calcite. 1630.0 1632.0 0il shale: dark brownish gray (10YR 3/2-2/2). Very faint smooth to slightly distorted laminations and streaked bedding. Regular to some irregular, thick to medium.shaly parting; irregular fracture. Rare dense brown to gray dolomite bands with short bitume coated fractures. Common very fine disseminated crystals in lower part. Sample of oil shale with very fine disseminated crystals in lower part. Sample of oil shale with very fine disseminated crystals from 1631.9 feet: X-ray - dawsonite, quartz, dolomite, feldspar (K and Na), illite. 1632.0 1633.0 0il shale: medium to dark brownish gray (10YR 4/2-3/and 3/1, rare 2/2). Faint slightly distorted laminations. Regular to slightly irregular, thick to some	
faint very smooth laminations and streaked bedding. Slightly irregular to regular, thick to thin shaly parting; slight hackly to conchoidal fracture. Common to rare fine crystalline streaks. 1622.9 1624.9 0il shale: dark and some medium brownish gray (2.5Y 3/2 and 3/1-2/2 and 2/1, some 4/1 lower part). Ver faint very smooth to some distorted and displaced laminations. Very regular to slightly irregular me to thin shaly parting; slight hackly fracture. Rar thin dense gray bands in lower part (like 1617.2 fe 0il shale: medium to dark brownish gray (10YR 4/1-3 and 3/2). Very faint smooth to rare distorted laminitions and streaked bedding. Very regular to slight irregular, thick to thin shaly parting; slight hack to irregular and some conchoidal fracture. Some medium to thin dense gray to brownish gray bands and rare thin irregular stringers. Sample of oil shale with very regular thin shally parting from 1625.4 feet: X-ray - quartz, dawsonite, K-feldspar; some dolomite, pyrite, illite, calcite. 0il shale: dark brownish gray (10YR 3/2-2/2). Very faint smooth to slightly distorted laminations and streaked bedding. Regular to some irregular, thick to medium.shaly parting; irregular fracture. Rare dense brown to gray dolomite bands with short bitume coated fractures. Common very fine disseminated crystals in lower part. Sample of oil shale with very fine disseminated crystals in lower part. Sample of oil shale with very fine disseminated crystals from 1631.9 feet: X-ray - dawsonite, quartz, dolomite, feldspar (K and Na), illite. 0il shale: medium to dark brownish gray (10YR 4/2-3/and 3/1, rare 2/2). Faint slightly distorted laminations and 3/1, rare 2/2).	
1622.9 1624.9 1624.9 1624.9 1622.9 1624.9 1624.9 1630.0 1632.0 1633.0 Sample of oil shale with very regular think shaly parting; slight hackly to conchoidal fracture. Common to rare fine crystalline streaks. 0il shale: dark and some medium brownish gray (2.5Y 3/2 and 3/1-2/2 and 2/1, some 4/1 lower part). Ver faint very smooth to some distorted and displaced laminations. Very regular to slightly irregular me to thin shaly parting; slight hackly fracture. Rar thin dense gray bands in lower part (like 1617.2 fe 0il shale: medium to dark brownish gray (10YR 4/1-3 and 3/2). Very faint smooth to rare distorted laminations and streaked bedding. Very regular to slight irregular, thick to thin shaly parting; slight hack to irregular and some conchoidal fracture. Some medium to thin dense gray to brownish gray bands and rare thin irregular stringers. Sample of oil shale with very regular thin shaly parting from 1625.4 feet: X-ray - quartz, dawsonite, K-feldspar; some dolomite, pyrite, illite, calcite. Oil shale: dark brownish gray (10YR 3/2-2/2). Very faint smooth to slightly distorted laminations and streaked bedding. Regular to some irregular, thick to medium shaly parting; irregular fracture. Rare dense brown to gray dolomite bands with short bitume coated fractures. Common very fine disseminated crystals in lower part. Sample of oil shale with very fine disseminated crystals from 1631.9 feet: X-ray - dawsonite, quartz, dolomite, feldspar (K and Na), illite. Oil shale: medium to dark brownish gray (10YR 4/2-3/and 3/1, rare 2/2). Faint slightly distorted laminations and spine medium to dark brownish gray (10YR 4/2-3/and 3/1, rare 2/2). Faint slightly distorted laminations and 3/1, rare 2/2).	
mon to rare fine crystalline streaks. 1622.9 1624.9 0il shale: dark and some medium brownish gray (2.5Y 3/2 and 3/1-2/2 and 2/1, some 4/1 lower part). Ver faint very smooth to some distorted and displaced laminations. Very regular to slightly irregular me to thin shaly parting; slight hackly fracture. Rar thin dense gray bands in lower part (like 1617.2 fe 0il shale: medium to dark brownish gray (10YR 4/1-3 and 3/2). Very faint smooth to rare distorted lamitions and streaked bedding. Very regular to slight irregular, thick to thin shaly parting; slight hack to irregular and some conchoidal fracture. Some medium to thin dense gray to brownish gray bands and rare thin irregular stringers. Sample of oil shale with very regular thin shaly parting from 1625.4 feet: X-ray - quartz, dawsonite, K-feldspar; some dolomite, pyrite, illite, calcite. 0il shale: dark brownish gray (10YR 3/2-2/2). Very faint smooth to slightly distorted laminations and streaked bedding. Regular to some irregular, thick to medium shaly parting; irregular fracture. Rare dense brown to gray dolomite bands with short bitume coated fractures. Common very fine disseminated crystals in lower part. Sample of oil shale with very fine disseminated crystals from 1631.9 feet: X-ray - dawsonite, quartz, dolomite, feldspar (K and Na), illite. 0il shale: medium to dark brownish gray (10YR 4/2-3/and 3/1, rare 2/2). Faint slightly distorted laminations and some coated fracture and some coated fractures. Common very fine disseminated crystals from 1631.9 feet: X-ray - dawsonite, quartz, dolomite, feldspar (K and Na), illite.	
mon to rare fine crystalline streaks. Oil shale: dark and some medium brownish gray (2.5Y 3/2 and 3/1-2/2 and 2/1, some 4/1 lower part). Ver faint very smooth to some distorted and displaced laminations. Very regular to slightly irregular me to thin shaly parting; slight hackly fracture. Rar thin dense gray bands in lower part (like 1617.2 fe oil shale: medium to dark brownish gray (10YR 4/1-3 and 3/2). Very faint smooth to rare distorted lamitions and streaked bedding. Very regular to slight irregular, thick to thin shaly parting; slight hack to irregular and some conchoidal fracture. Some medium to thin dense gray to brownish gray bands and rare thin irregular stringers. Sample of oil shale with very regular thin shall parting from 1625.4 feet: X-ray - quartz, dawsonite, K-feldspar; some dolomite, pyrite, illite, calcite. Oil shale: dark brownish gray (10YR 3/2-2/2). Very faint smooth to slightly distorted laminations and streaked bedding. Regular to some irregular, thick to medium shaly parting; irregular fracture. Rare dense brown to gray dolomite bands with short bitume coated fractures. Common very fine disseminated crystals in lower part. Sample of oil shale with very fine disseminated crystals from 1631.9 feet: X-ray - dawsonite, quartz, dolomite, feldspar (K and Na), illite. Oil shale: medium to dark brownish gray (10YR 4/2-3/and 3/1, rare 2/2). Faint slightly distorted laminations and streaked from the dark brownish gray (10YR 4/2-3/and 3/1, rare 2/2).	
oil shale: dark and some medium brownish gray (2.5y 3/2 and 3/1-2/2 and 2/1, some 4/1 lower part). Ver faint very smooth to some distorted and displaced laminations. Very regular to slightly irregular me to thin shaly parting; slight hackly fracture. Rar thin dense gray bands in lower part (like 1617.2 fe oil shale: medium to dark brownish gray (10YR 4/1-3 and 3/2). Very faint smooth to rare distorted lamitions and streaked bedding. Very regular to slight irregular, thick to thin shaly parting; slight hack to irregular and some conchoidal fracture. Some medium to thin dense gray to brownish gray bands and rare thin irregular stringers. Sample of oil shale with very regular thin shall parting from 1625.4 feet: X-ray - quartz, dawsonite, K-feldspar; some dolomite, pyrite, illite, calcite. Oil shale: dark brownish gray (10YR 3/2-2/2). Very faint smooth to slightly distorted laminations and streaked bedding. Regular to some irregular, thick to medium shaly parting; irregular fracture. Rare dense brown to gray dolomite bands with short bitume coated fractures. Common very fine disseminated crystals in lower part. Sample of oil shale with very fine disseminated crystals from 1631.9 feet: X-ray - dawsonite, quartz, dolomite, feldspar (K and Na), illite. Oil shale: medium to dark brownish gray (10YR 4/2-3/and 3/1, rare 2/2). Faint slightly distorted laminarions and streaked bedium to dark brownish gray (10YR 4/2-3/and 3/1, rare 2/2).	
3/2 and 3/1-2/2 and 2/1, some 4/1 lower part). Ver faint very smooth to some distorted and displaced laminations. Very regular to slightly irregular me to thin shaly parting; slight hackly fracture. Rar thin dense gray bands in lower part (like 1617.2 fe 0il shale: medium to dark brownish gray (10YR 4/1-3 and 3/2). Very faint smooth to rare distorted lamitions and streaked bedding. Very regular to slight irregular, thick to thin shaly parting; slight hack to irregular and some conchoidal fracture. Some medium to thin dense gray to brownish gray bands and rare thin irregular stringers. Sample of oil shale with very regular thin shally parting from 1625.4 feet: X-ray - quartz, dawsonite, K-feldspar; some dolomite, pyrite, illite, calcite. 0il shale: dark brownish gray (10YR 3/2-2/2). Very faint smooth to slightly distorted laminations and streaked bedding. Regular to some irregular, thick to medium shaly parting; irregular fracture. Rare dense brown to gray dolomite bands with short bitume coated fractures. Common very fine disseminated crystals in lower part. Sample of oil shale with very fine disseminated crystals from 1631.9 feet: X-ray - dawsonite, quartz, dolomite, feldspar (K and Na), illite. 0il shale: medium to dark brownish gray (10YR 4/2-3/and 3/1, rare 2/2). Faint slightly distorted laminations and streaked bedum to dark brownish gray (10YR 4/2-3/and 3/1, rare 2/2).	
laminations. Very regular to slightly irregular me to thin shaly parting; slight hackly fracture. Rar thin dense gray bands in lower part (like 1617.2 fe 0il shale: medium to dark brownish gray (10YR 4/1-3 and 3/2). Very faint smooth to rare distorted lamitions and streaked bedding. Very regular to slight irregular, thick to thin shaly parting; slight hack to irregular and some conchoidal fracture. Some medium to thin dense gray to brownish gray bands and rare thin irregular stringers. Sample of oil shale with very regular thin shall parting from 1625.4 feet: X-ray - quartz, dawsonite, K-feldspar; some dolomite, pyrite, illite, calcite. 1630.0 1632.0 0il shale: dark brownish gray (10YR 3/2-2/2). Very faint smooth to slightly distorted laminations and streaked bedding. Regular to some irregular, thick to medium shaly parting; irregular fracture. Rare dense brown to gray dolomite bands with short bitume coated fractures. Common very fine disseminated crystals in lower part. Sample of oil shale with very fine disseminated crystals from 1631.9 feet: X-ray - dawsonite, quartz, dolomite, feldspar (K and Na), illite. 0il shale: medium to dark brownish gray (10YR 4/2-3/and 3/1, rare 2/2). Faint slightly distorted laminations and 3/1, rare 2/2).	
1624.9 1630.0 1630.0 1632.0 1632.0 1632.0 1633.0 1632.0 1633.0 1632.0 1633.0 1632.0 1633.0 1632.0 1633.0 1632.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 1633.0 16	7
to thin shaly parting; slight hackly fracture. Rar thin dense gray bands in lower part (like 1617.2 fe 0il shale: medium to dark brownish gray (10YR 4/1-3 and 3/2). Very faint smooth to rare distorted lamitions and streaked bedding. Very regular to slight irregular, thick to thin shaly parting; slight hack to irregular and some conchoidal fracture. Some medium to thin dense gray to brownish gray bands and rare thin irregular stringers. Sample of oil shale with very regular thin shall parting from 1625.4 feet: X-ray - quartz, dawsonite, K-feldspar; some dolomite, pyrite, illite, calcite. Oil shale: dark brownish gray (10YR 3/2-2/2). Very faint smooth to slightly distorted laminations and streaked bedding. Regular to some irregular, thick to medium shaly parting; irregular fracture. Rare dense brown to gray dolomite bands with short bitume coated fractures. Common very fine disseminated crystals in lower part. Sample of oil shale with very fine disseminated crystals from 1631.9 feet: X-ray - dawsonite, quartz, dolomite, feldspar (K and Na), illite. Oil shale: medium to dark brownish gray (10YR 4/2-3/and 3/1, rare 2/2). Faint slightly distorted laminations and streaked bedding. Regular to some irregular, thick to medium to dark brownish gray (10YR 4/2-3/and 3/1, rare 2/2).	
1624.9 1630.0 0il shale: medium to dark brownish gray (10YR 4/1-3 and 3/2). Very faint smooth to rare distorted lamitions and streaked bedding. Very regular to slight irregular, thick to thin shaly parting; slight hack to irregular and some conchoidal fracture. Some medium to thin dense gray to brownish gray bands and rare thin irregular stringers. Sample of oil shale with very regular thin shall parting from 1625.4 feet: X-ray - quartz, dawsonite, K-feldspar; some dolomite, pyrite, illite, calcite. 0il shale: dark brownish gray (10YR 3/2-2/2). Very faint smooth to slightly distorted laminations and streaked bedding. Regular to some irregular, thick to medium shaly parting; irregular fracture. Rare dense brown to gray dolomite bands with short bitume coated fractures. Common very fine disseminated crystals in lower part. Sample of oil shale with very fine disseminated crystals from 1631.9 feet: X-ray - dawsonite, quartz, dolomite, feldspar (K and Na), illite. 0il shale: medium to dark brownish gray (10YR 4/2-3/and 3/1, rare 2/2). Faint slightly distorted laminations and 3/1, rare 2/2).	lium
and 3/2). Very faint smooth to rare distorted lamitions and streaked bedding. Very regular to slight irregular, thick to thin shaly parting; slight hack to irregular and some conchoidal fracture. Some medium to thin dense gray to brownish gray bands and rare thin irregular stringers. Sample of oil shale with very regular thin shall parting from 1625.4 feet: X-ray - quartz, dawsonite, K-feldspar; some dolomite, pyrite, illite, calcite. Oil shale: dark brownish gray (10YR 3/2-2/2). Very faint smooth to slightly distorted laminations and streaked bedding. Regular to some irregular, thick to medium shaly parting; irregular fracture. Rare dense brown to gray dolomite bands with short bitume coated fractures. Common very fine disseminated crystals in lower part. Sample of oil shale with very fine disseminated crystals from 1631.9 feet: X-ray - dawsonite, quartz, dolomite, feldspar (K and Na), illite. Oil shale: medium to dark brownish gray (10YR 4/2-3/and 3/1, rare 2/2). Faint slightly distorted lamina	<u> </u>
and 3/2). Very faint smooth to rare distorted lamitions and streaked bedding. Very regular to slight irregular, thick to thin shaly parting; slight hack to irregular and some conchoidal fracture. Some medium to thin dense gray to brownish gray bands and rare thin irregular stringers. Sample of oil shale with very regular thin shall parting from 1625.4 feet: X-ray - quartz, dawsonite, K-feldspar; some dolomite, pyrite, illite, calcite. 1630.0 1632.0 0il shale: dark brownish gray (10YR 3/2-2/2). Very faint smooth to slightly distorted laminations and streaked bedding. Regular to some irregular, thick to medium shaly parting; irregular fracture. Rare dense brown to gray dolomite bands with short bitume coated fractures. Common very fine disseminated crystals in lower part. Sample of oil shale with very fine disseminated crystals from 1631.9 feet: X-ray - dawsonite, quartz, dolomite, feldspar (K and Na), illite. 1632.0 1633.0 0il shale: medium to dark brownish gray (10YR 4/2-3/and 3/1, rare 2/2). Faint slightly distorted lamina	t?)
irregular, thick to thin shaly parting; slight hack to irregular and some conchoidal fracture. Some medium to thin dense gray to brownish gray bands and rare thin irregular stringers. Sample of oil shale with very regular thin shall parting from 1625.4 feet: X-ray - quartz, dawsonite, K-feldspar; some dolomite, pyrite, illite, calcite. Oil shale: dark brownish gray (10YR 3/2-2/2). Very faint smooth to slightly distorted laminations and streaked bedding. Regular to some irregular, thick to medium shaly parting; irregular fracture. Rare dense brown to gray dolomite bands with short bitume coated fractures. Common very fine disseminated crystals in lower part. Sample of oil shale with very fine disseminated crystals from 1631.9 feet: X-ray - dawsonite, quartz, dolomite, feldspar (K and Na), illite. Oil shale: medium to dark brownish gray (10YR 4/2-3/and 3/1, rare 2/2). Faint slightly distorted lamina	1
to irregular, thick to thin shaly parting; slight hack to irregular and some conchoidal fracture. Some medium to thin dense gray to brownish gray bands and rare thin irregular stringers. Sample of oil shale with very regular thin shall parting from 1625.4 feet: X-ray - quartz, dawsonite, K-feldspar; some dolomite, pyrite, illite, calcite. 1630.0 1632.0 0il shale: dark brownish gray (10YR 3/2-2/2). Very faint smooth to slightly distorted laminations and streaked bedding. Regular to some irregular, thick to medium shaly parting; irregular fracture. Rare dense brown to gray dolomite bands with short bitume coated fractures. Common very fine disseminated crystals in lower part. Sample of oil shale with very fine disseminated crystals from 1631.9 feet: X-ray - dawsonite, quartz, dolomite, feldspar (K and Na), illite. 1632.0 1633.0 0il shale: medium to dark brownish gray (10YR 4/2-3/and 3/1, rare 2/2). Faint slightly distorted lamina	ıa-
to irregular, thick to thin shaly parting; slight hack to irregular and some conchoidal fracture. Some medium to thin dense gray to brownish gray bands and rare thin irregular stringers. Sample of oil shale with very regular thin shall parting from 1625.4 feet: X-ray - quartz, dawsonite, K-feldspar; some dolomite, pyrite, illite, calcite. 1630.0 1632.0 0il shale: dark brownish gray (10YR 3/2-2/2). Very faint smooth to slightly distorted laminations and streaked bedding. Regular to some irregular, thick to medium shaly parting; irregular fracture. Rare dense brown to gray dolomite bands with short bitume coated fractures. Common very fine disseminated crystals in lower part. Sample of oil shale with very fine disseminated crystals from 1631.9 feet: X-ray - dawsonite, quartz, dolomite, feldspar (K and Na), illite. 1632.0 1633.0 0il shale: medium to dark brownish gray (10YR 4/2-3/and 3/1, rare 2/2). Faint slightly distorted lamina	.y
medium to thin dense gray to brownish gray bands and rare thin irregular stringers. Sample of oil shale with very regular thin shall parting from 1625.4 feet: X-ray - quartz, dawsonite, K-feldspar; some dolomite, pyrite, illite, calcite. Oil shale: dark brownish gray (10YR 3/2-2/2). Very faint smooth to slightly distorted laminations and streaked bedding. Regular to some irregular, thick to medium shaly parting; irregular fracture. Rare dense brown to gray dolomite bands with short bitume coated fractures. Common very fine disseminated crystals in lower part. Sample of oil shale with very fine disseminated crystals from 1631.9 feet: X-ray - dawsonite, quartz, dolomite, feldspar (K and Na), illite. Oil shale: medium to dark brownish gray (10YR 4/2-3/and 3/1, rare 2/2). Faint slightly distorted lamina	.у
Sample of oil shale with very regular thin shall parting from 1625.4 feet: X-ray - quartz, dawsonite, K-feldspar; some dolomite, pyrite, illite, calcite. 1630.0 1632.0 0il shale: dark brownish gray (10YR 3/2-2/2). Very faint smooth to slightly distorted laminations and streaked bedding. Regular to some irregular, thick to medium shaly parting; irregular fracture. Rare dense brown to gray dolomite bands with short bitume coated fractures. Common very fine disseminated crystals in lower part. Sample of oil shale with very fine disseminated crystals from 1631.9 feet: X-ray - dawsonite, quartz, dolomite, feldspar (K and Na), illite. 1632.0 1633.0 0il shale: medium to dark brownish gray (10YR 4/2-3/and 3/1, rare 2/2). Faint slightly distorted lamina	
Sample of oil shale with very regular thin shall parting from 1625.4 feet: X-ray - quartz, dawsonite, K-feldspar; some dolomite, pyrite, illite, calcite. 1630.0 1632.0 0il shale: dark brownish gray (10YR 3/2-2/2). Very faint smooth to slightly distorted laminations and streaked bedding. Regular to some irregular, thick to medium shaly parting; irregular fracture. Rare dense brown to gray dolomite bands with short bitume coated fractures. Common very fine disseminated crystals in lower part. Sample of oil shale with very fine disseminated crystals from 1631.9 feet: X-ray - dawsonite, quartz, dolomite, feldspar (K and Na), illite. 0il shale: medium to dark brownish gray (10YR 4/2-3/and 3/1, rare 2/2). Faint slightly distorted lamina	
Nample of oil shale with very fine disseminated crystals in lower part. Sample of oil shale with very fine disseminated crystals from 1631.9 feet: X-ray - quartz, dawsonite, K-feldspar; some dolomite, pyrite, illite, calcite. 0il shale: dark brownish gray (10YR 3/2-2/2). Very faint smooth to slightly distorted laminations and streaked bedding. Regular to some irregular, thick to medium shaly parting; irregular fracture. Rare dense brown to gray dolomite bands with short bitume coated fractures. Common very fine disseminated crystals in lower part. Sample of oil shale with very fine disseminated crystals from 1631.9 feet: X-ray - dawsonite, quartz, dolomite, feldspar (K and Na), illite. 0il shale: medium to dark brownish gray (10YR 4/2-3/and 3/1, rare 2/2). Faint slightly distorted lamina	
Nample of oil shale with very fine disseminated crystals in lower part. Sample of oil shale with very fine disseminated crystals from 1631.9 feet: X-ray - quartz, dawsonite, K-feldspar; some dolomite, pyrite, illite, calcite. 0il shale: dark brownish gray (10YR 3/2-2/2). Very faint smooth to slightly distorted laminations and streaked bedding. Regular to some irregular, thick to medium shaly parting; irregular fracture. Rare dense brown to gray dolomite bands with short bitume coated fractures. Common very fine disseminated crystals in lower part. Sample of oil shale with very fine disseminated crystals from 1631.9 feet: X-ray - dawsonite, quartz, dolomite, feldspar (K and Na), illite. 0il shale: medium to dark brownish gray (10YR 4/2-3/and 3/1, rare 2/2). Faint slightly distorted lamina	
dolomite, pyrite, illite, calcite. 1630.0 1632.0 0il shale: dark brownish gray (10YR 3/2-2/2). Very faint smooth to slightly distorted laminations and streaked bedding. Regular to some irregular, thick to medium shaly parting; irregular fracture. Rare dense brown to gray dolomite bands with short bitume coated fractures. Common very fine disseminated crystals in lower part. Sample of oil shale with very fine disseminated crystals from 1631.9 feet: X-ray - dawsonite, quartz, dolomite, feldspar (K and Na), illite. 1632.0 1633.0 0il shale: medium to dark brownish gray (10YR 4/2-3/and 3/1, rare 2/2). Faint slightly distorted lamina	
1630.0 Oil shale: dark brownish gray (10YR 3/2-2/2). Very faint smooth to slightly distorted laminations and streaked bedding. Regular to some irregular, thick to medium shaly parting; irregular fracture. Rare dense brown to gray dolomite bands with short bitume coated fractures. Common very fine disseminated crystals in lower part. Sample of oil shale with very fine disseminated crystals from 1631.9 feet: X-ray - dawsonite, quartz, dolomite, feldspar (K and Na), illite. 1632.0 1633.0 Oil shale: medium to dark brownish gray (10YR 4/2-3/and 3/1, rare 2/2). Faint slightly distorted lamina	
faint smooth to slightly distorted laminations and streaked bedding. Regular to some irregular, thick to medium shaly parting; irregular fracture. Rare dense brown to gray dolomite bands with short bitume coated fractures. Common very fine disseminated crystals in lower part. Sample of oil shale with very fine disseminated crystals from 1631.9 feet: X-ray - dawsonite, quartz, dolomite, feldspar (K and Na), illite. 1632.0 1633.0 Oil shale: medium to dark brownish gray (10YR 4/2-3/and 3/1, rare 2/2). Faint slightly distorted lamina	
streaked bedding. Regular to some irregular, thick to medium shaly parting; irregular fracture. Rare dense brown to gray dolomite bands with short bitume coated fractures. Common very fine disseminated crystals in lower part. Sample of oil shale with very fine disseminated crystals from 1631.9 feet: X-ray - dawsonite, quartz, dolomite, feldspar (K and Na), illite. 1632.0 1633.0 Oil shale: medium to dark brownish gray (10YR 4/2-3/and 3/1, rare 2/2). Faint slightly distorted lamina	
to medium shaly parting; irregular fracture. Rare dense brown to gray dolomite bands with short bitume coated fractures. Common very fine disseminated crystals in lower part. Sample of oil shale with very fine disseminated crystals from 1631.9 feet: X-ray - dawsonite, quartz, dolomite, feldspar (K and Na), illite. 1632.0 1633.0 0il shale: medium to dark brownish gray (10YR 4/2-3/and 3/1, rare 2/2). Faint slightly distorted lamina	
dense brown to gray dolomite bands with short bitume coated fractures. Common very fine disseminated crystals in lower part. Sample of oil shale with very fine disseminated crystals from 1631.9 feet: X-ray - dawsonite, quartz, dolomite, feldspar (K and Na), illite. 1632.0 1633.0 Oil shale: medium to dark brownish gray (10YR 4/2-3/and 3/1, rare 2/2). Faint slightly distorted lamina	
dense brown to gray dolomite bands with short bitume coated fractures. Common very fine disseminated crystals in lower part. Sample of oil shale with very fine disseminated crystals from 1631.9 feet: X-ray - dawsonite, quartz, dolomite, feldspar (K and Na), illite. 1632.0 1633.0 Oil shale: medium to dark brownish gray (10YR 4/2-3/and 3/1, rare 2/2). Faint slightly distorted lamina	
coated fractures. Common very fine disseminated crystals in lower part. Sample of oil shale with very fine disseminated crystals from 1631.9 feet: X-ray - dawsonite, quartz, dolomite, feldspar (K and Na), illite. 1632.0 1633.0 Oil shale: medium to dark brownish gray (10YR 4/2-3/and 3/1, rare 2/2). Faint slightly distorted lamina	n-
Crystals in lower part. Sample of oil shale with very fine disseminated crystals from 1631.9 feet: X-ray - dawsonite, quartz, dolomite, feldspar (K and Na), illite. 1632.0 1633.0 Oil shale: medium to dark brownish gray (10YR 4/2-3/and 3/1, rare 2/2). Faint slightly distorted lamina	
crystals from 1631.9 feet: X-ray - dawsonite, quartz, dolomite, feldspar (K and Na), illite. 1632.0 1633.0 Oil shale: medium to dark brownish gray (10YR 4/2-3/and 3/1, rare 2/2). Faint slightly distorted lamina	
crystals from 1631.9 feet: X-ray - dawsonite, quartz, dolomite, feldspar (K and Na), illite. 1632.0 1633.0 Oil shale: medium to dark brownish gray (10YR 4/2-3/and 3/1, rare 2/2). Faint slightly distorted lamina	
(K and Na), illite. 1632.0 1633.0 Oil shale: medium to dark brownish gray (10YR 4/2-3/and 3/1, rare 2/2). Faint slightly distorted lamina	
(K and Na), illite. 1632.0 1633.0 Oil shale: medium to dark brownish gray (10YR 4/2-3/and 3/1, rare 2/2). Faint slightly distorted lamina	
1632.0 1633.0 Oil shale: medium to dark brownish gray (10YR 4/2-3/and 3/1, rare 2/2). Faint slightly distorted lamina	-
and 3/1, rare 2/2). Faint slightly distorted lamina	?
tions. Regular to slightly irrogular think to	_
The state of the s	
thin shaly parting; irregular fracture. Some thin d	on e c
brownish gray dolomite bands with common short verti	cal
fractures. Some very fine disseminated crystals.	Jal
1633.0 1636.0 Oil shale: dark brownish gray (10YR 3/2 and 3/1-2/2,	
some 2/1 upper part). Very faint smooth to slightly	
distorted laminations and streaked bedding. Regular	. -
some irregular, thick to medium shaly parting; irreg	EO
to conchoidal fracture. Rare thin dense dark gray b	ııar
and stringers. Rare very fine vitreous black streak	inds
upper part.	3 in
The state of the s	

Illustration No. SBR-3891P (Sheet 11 of 57)

Core samples from Equity Oil Company's Oldland Corehole 3--Continued

From	То	Description
1650.0	1652.5	Marlstone and some oil shale: buff to some medium
		brownish gray (10YR and 2.5Y 7/2 and 7/1-6/2 and 6/1,
		some 5/2, rare 4/2). Very faint to some distinct,
		smooth to some very distorted and displaced laminations.
		Regular to rare irregular, thick to some thin shaly
and the second		parting (common unctuous parting surfaces); slightly
		irregular and rare hackly fracture. Some fine gray laminae and streaks.
1652.5	1659.0	Oil shale and some marietare. The same and some marietare.
	_057,0	Oil shale and some marlstone: light to medium brownish
		gray (2.5Y 6/1 and 6/2-5/1 and 5/2, some 4/2). Faint
		to moderately distinct, smooth to slightly irregular
		and distorted laminations; some displacements and rare small loop structures. Regular to slightly irregular,
		thick to some thin shaly parting (common unctuous part-
	12.4	ing surfaces); irregular to some hackly fracture. Rare
		very fine gray laminae and streaks. Very rare black
	.*	plant fragments on parting surfaces.
1659.0	1662.5	Oil shale and some marlstone: medium to light brownish
		gray (2.5Y and 10YR 4/2-6/2 and 6/1). Faint to very
•		faint, fairly smooth to some very distorted and dis-
		placed laminations and streaked bedding. Regular to
•		some irregular, thick to medium shaly parting; ir-
•		regular fracture. Rare small gray discolored patches.
		Very rare very fine prismatic calcite stringers (or
	•	reacture rillings) some with common purity A work
	•	fine irregular fracture with black fillings and slightly
	•	discolored gray edges in middle part
1662.5	1667.0	Oil shale and some marlstone: medium to light brownish
•		8^{14} (2.31 3/2 and 5/1-6/2 and 6/1 rare 4/2) Frint
		distorted and displaced to some smooth laminations
	To the second	Bilghtly irregular to some very irregular thick to
		medium shary parting: irregular fracture Para fina
	°•	Short liregular vertical fractures with rust brown to
1667.0	1.000	coloriess crystalline fillings (0.5 foot missing)
1667.0	1670.0	ndistone and oil shale: buff to medium and rare dark
		blownish gray $(2.597/2-5/2. \text{ some } 4/2 \text{ rare } 3/2)$
		Distinct to some faint, slightly distorted and commonly
		displaced laminations to very distorted etreaks and
		Stilligers. Slightly irregular thick to medium chalm
		parting, sitghtly irregular tracture. Para fine chorn
		vertical fractures with brown bitumen-impregnated
		crystalline fillings.
	-	

Illustration No. SBR-3891P (Sheet 13 of 57)

Core samples from Equity Oil Company's Oldland Corehole 3--Continued

From	То	Description
1678.0	1680.0	Oil shale: medium brownish gray and some tan (2.5Y and
		10YR 5/2-4/2, some 6/3). Very faint to faint, distorted
		to some fairly smooth laminations, stringers, and streaks
•		COMMON Gignigate and are find
		regular thick parting; irregular fracture. Rare irregular
		dense brownish gray dolomite stringers with short vertical
		fractures. Very rare small brown crystalline lenses.
1680.0	1684.9	Oil shale: medium brownish gray (2.5Y and 10YR 5/2-4/2).
		Very faint distorted and some contorted streaks and
		stringers. Irregular thick parting; irregular and rare
		hackly fracture. Some very irregular fine lacy black
		pyritic stringers in upper half.
		Sample of shale with fine black pyritic stringers
		from 1681.8 feet:
		X-ray - quartz, dolomite, feldspar (K and Na),
		dawsonite, pyrite.
1684.9	1689.0	Oil shale: medium brownish gray (2.5Y 4/1-5/1 and 5/2;
		some slight olive tint to almost neutral) and medium to
		rare dark brown (10YR $5/3-4/3$, rare $3/3-2/2$) Very faint
	•	to rate moderately distinct, fairly smooth to distorted
		laminations, stringers, and streaks: brown colors in
		U.1- to U.4-100t zones. Irregular to some slightly in
	•	regular thick parting; irregular hackly to some fairly
		smooth fracture. Rare fine black larry stringers in urpor
		part. Rare very fine disseminated crystals and crystal.
**		line streaks in some brown zones.
		Sample of oil shale with slight olive tint from
		1686./ feet:
		X-ray - quartz, feldspar (Na and K), dolomite,
		dawsonite, illite, pyrite.
		Sample of brown oil shale from 1687.3 feet:
	•	X-ray - dolomite, quartz, feldspar (K and Na):
1600 0	1600.0	some dawsonite illite
1689.0	1690.0	0il shale: medium brownish gray and rare brown (2.5Y
		4/2-5/2, rare 5/3). Very faint distorted to smooth
		streaked bedding. Irregular to slightly irregular
		thick parting; irregular fracture. Rare very small
1690.0	1699.0	bull earthy lenses.
10,0.0	1099.0	Oil shale: medium to light brownish gray and some brown
		$\frac{1}{2.51} \frac{1}{5/2-6/2}$, some $\frac{5}{3-6/3}$. Very faint to
		some moderately distinct, distorted and displaced to
		some smooth laminations and streaked bedding; some
		small irregular loop structures. Irregular to slightly
		irregular thick parting; slightly irregular to irregular
		fracture. Very rare fine irregular black stringers.
		Very rare black plant fragments on parting surfaces.

Illustration No. SBR-3891P (Sheet 15 of 57)

Core samples from Equity Oil Company's Oldland Corehole 3--Continued

1711.1 1712.1 Oil shale: dark to medium brown and brownish gray (10Y and 2.5Y 3/3-4/3 and 4/2, rare 5/3). Very faint to rare distinct distorted streaks, stringers, and rare laminations. Irregular thick to medium parting; irregular and rare hackly fracture. Some fine buff eart streaks. 1712.1 1715.0 Oil shale: medium to rare light brownish gray and brow (2.5Y 4/2-5/2 and 5/3, rare 6/2). Very faint to faint fairly smooth to very irregular and distorted laminations, stringers, and streaks; common small loop structures and displacements. Irregular to some slight irregular, thick to medium parting; irregular fracture Rare small brown to tan crystalline lenses and streaks oil shale: medium to dark brownish gray and brown (2.5 and 10YR 4/2-3/2 and 3/3, rare 2/2). Faint to very fa distorted to fairly smooth streaks and stringers; some fairly large irregular loop structures near top. Irregular thick parting; irregular to rare hackly fractures and laminations. Irregular to some browniblack (10YR 3/2 and 3/3-2/2, some 1/2); some very slig satiny luster. Very faint to faint distorted streaks, stringers, and rare laminations. Irregular hackly fracture. Some thin dense brown dolomite stringers with short vertical bitumen-coated fractures in lower part. Footage remeasured from 1717.0 to 1751.8 feet. Oil shale: medium to dark brownish gray and brown, rare brownish black (10TR and 2.5Y 5/2 and 5/3-3/2 and 3/3, rare 2/2-1/2). Faint to some distinct, slightly irregular thick to rare thin parting; irregular fracture some very small brown crystalline lenses near top. Oil shale: medium brownish gray to rare brown and tan, rare dark brownish gray in upper and lower parts (2.5Y 5/2-2-1/2, rare 5/3-6/3 and 3/2). Moderately distinct to faint, distorted to fairly smooth laminations with common loop structures in upper and lower parts; distorted streaks and stringers in middle part. Trregular and rare hackly fracture. Common small brown to buff lenses and streaks in upper part. A very irregular thrown length and rare hackly fracture.	From	То	Description
and 2.5Y 3/3-4/3 and 4/2, rare 5/3). Very faint to rare distinct distorted streaks, stringers, and rare laminations. Irregular thick to medium parting; irregular and rare hackly fracture. Some fine buff eart streaks. 1712.1 1715.0 011 shale: medium to rare light brownish gray and brow (2.5Y 4/2-5/2 and 5/3, rare 6/2). Very faint to faint fairly smooth to very irregular and distorted laminations, stringers, and streaks; common small loop structures and displacements. Irregular fracture Rare small brown to tan crystalline lenses and streaks oil shale: medium to dark brownish gray and brown (2.5 and 10YR 4/2-3/2 and 3/3, rare 2/2). Faint to very fa distorted to fairly smooth streaks and stringers; some fairly large irregular loop structures near top. Irregular thick parting; irregular to rare hackly fracture Rare small to medium dense brown lenses. 1716.0 1717.4 0113.4 011 shale: dark brownish gray and brown to some browning black (10YR 3/2 and 3/3-2/2, some 1/2); some very slig satiny luster. Very faint to faint distorted streaks, stringers, and rare laminations. Irregular hackly fracture. Some thin dense brown dolomite stringers with short vertical bitumen-coated fractures in lower parts. Footage remeasured from 1717.0 to 1751.8 feet. 1717.4 1718.4 011 shale: medium to dark brownish gray and brown, rare brownish black (10YR and 2.5Y 5/2 and 5/3-3/2 and 3/3, rare 2/2-1/2). Faint to some distinct, slightly irregular thick to rere thin parting; irregular fractures one very small brown crystalline lenses near top. 1718.4 1722.5 011 shale: medium brownish gray to rare brown and tan, rare dark brownish gray in upper and lower parts; distorted streaks and stringers in middle part. Trregular to slightly irregular, thick to medium parting; irregular fracture dark brownish gray in upper and lower parts; distorted streaks and stringers in middle part. Trregular to slightly irregular, thick to medium parting; irregular to slightly irregular, thick to medium parting; irregular to slightly irregular, thick to medium part	1711.1	1712.1	Oil shale: dark to medium brown and brownish gray (10VP)
rare distinct distorted streaks, stringers, and rare laminations. Irregular thick to medium parting; irregular and rare hackly fracture. Some fine buff eart streaks. 1712.1 1715.0 0il shale: medium to rare light brownish gray and brow (2.5Y 4/2-5/2 and 5/3, rare 6/2). Very faint to faint fairly smooth to very irregular and distorted laminations, stringers, and streaks; common small loop structures and displacements. Irregular to some sligh irregular, thick to medium parting; irregular fracture Rare small brown to tan crystalline lenses and streaks oil shale: medium to dark brownish gray and brown (2.5 and 10YR 4/2-3/2 and 3/3, rare 2/2). Faint to very fa distorted to fairly smooth streaks and stringers; some fairly large irregular loop structures near top. Irregular thick parting; irregular to rare hackly fracture. Rare small to medium dense brown lenses. 1716.0 1717.4 0il shale: dark brownish gray and brown to some browning black (10YR 3/2 and 3/3-2/2, some 1/2); some very slig satiny luster. Very faint to faint distorted streaks, stringers, and rare laminations. Irregular hackly fracture. Some thin dense brown dolomite stringers with short vertical bitumen-coated fractures in lower parts. Footage remeasured from 1717.0 to 1751.8 feet. 1717.4 1718.4 0il shale: medium to dark brownish gray and brown, rare brownish black (10YR and 2.5Y 5/2 and 5/3-3/2 and 3/3, rare 2/2-1/2). Faint to some distinct, slightly irregular thick to rare thin parting; irregular fractures medium the lenses near top. 1718.4 1722.5 0il shale: medium brownish gray to rare brown and tan, rare dark brownish gray in upper and lower parts; distorted streaks and stringers in middle part. Trregular to slightly irregular, thick to medium parting; irregular fracture dark brownish gray in upper and lower parts; distorted streaks and stringers in middle part. Trregular to slightly irregular, thick to medium parting; irregular to slightly irregular, thick to medium parting; irregular and rare hackly fracture. Common small brown to buff lenses an			and 2.58 3/3-4/3 and 4/2 rare 5/3) Very frint to
lamfiations. Irregular thick to medium parting; irregular and rare hackly fracture. Some fine buff eart streaks. 1712.1 1715.0 0il shale: medium to rare light brownish gray and brow (2.5Y 4/2-5/2 and 5/3, rare 6/2). Very faint to faint fairly smooth to very irregular and distorted lamfinations, stringers, and streaks; common small loop structures and displacements. Irregular to some sligh irregular, thick to medium parting; irregular fracture Rare small brown to ten crystalline lenses and streaks 0il shale: medium to dark brownish gray and brown (2.5 and 10 x 4/2-3/2 and 3/3, rare 2/2). Faint to very fa distorted to fairly smooth streaks and stringers; some fairly large irregular loop structures near top. Irregular thick parting; irregular to rare hackly fractures are small to medium dense brown lenses. 1716.0 1717.4 0il shale: dark brownish gray and brown to some browning black (10 x 3/2 and 3/3-2/2, some 1/2); some very slig satiny luster. Very faint to faint distorted streaks, stringers, and rare laminations. Irregular backly fracture. Some thin dense brown dolomite stringers with short vertical bitumen-coated fractures in lower part. Footage remeasured from 1717.0 to 1751.8 feet. 1717.4 1718.4 0il shale: medium to dark brownish gray and brown, rar brownish black (10 x and 2.5 y 5/2 and 5/3-3/2 and 3/3, rare 2/2-1/2). Faint to some distinct, slightly irregular thick to rare thin parting; irregular fracture. Some very small brown crystalline lenses near top. 1718.4 1722.5 0il shale: medium brownish gray to rare brown and tan, rare dark brownish gray in upper and lower parts; (2.5 y 5/2-4/2, rare 5/3-6/3 and 3/2). Moderately distinct to faint, distorted to fairly smooth laminations with common loop structures in upper and lower parts; distorted streaks and stringers in middle part. Irregular to slightly irregular, thick to medium parting; irregular and rare hackly fracture. Common small brown to buff lenses and streaks in upper part. A very irregular the lenses and streaks in upper part.			rare distinct distorted strocks atringers and many
regular and rare hackly fracture. Some fine buff eart streaks. 1712.1 1715.0 01 shale: medium to rare light brownish gray and brow (2.57 4/2-5/2 and 5/3, rare 6/2). Very faint to faint fairly smooth to very irregular and distorted laminations, stringers, and streaks; common small loop structures and displacements. Irregular to some sligh irregular, thick to medium parting; irregular fracture Rare small brown to tan crystalline lenses and streaks oil shale: medium to dark brownish gray and brown (2.5 and 10VR 4/2-3/2 and 3/3, rare 2/2). Faint to very fa distorted to fairly smooth streaks and stringers; some fairly large irregular loop structures near top. Irregular thick parting; irregular to rare hackly fracture. Rare small to medium dense brown lenses. 1716.0 1717.4 01 shale: dark brownish gray and brown to some browning black (10VR 3/2 and 3/3-2/2, some 1/2); some very slig satiny luster. Very faint to faint distorted streaks, stringers, and rare laminations. Irregular to slightly fracture. Some thin dense brown dolomite stringers with short vertical bitumen-coated fractures in lower part. Footage remeasured from 1717.0 to 1751.8 feet. 1717.4 1718.4 01 shale: medium to dark brownish gray and brown, rare brownish black (10VR and 2.5V 5/2 and 5/3-3/2 and 3/3, rare 2/2-1/2). Faint to some distinct, slightly irregular and distorted laminations; common loop structure. Some very small brown crystalline lenses near top. 1718.4 1722.5 01 shale: medium brownish gray to rare brown and tan, rare dark brownish gray in upper and lower parts; (2.5V 5/2-4/2, rare 5/3-6/3 and 3/2). Moderately distinct to faint, distorted to fairly smooth laminations with common loop structures in upper and lower parts; distorted streaks and stringers in middle part. Trregular to slightly irregular, thick to medium parting; irregular and rare hackly fracture. Common small brown to buff lenses and streaks in upper part. A very irregular the lenses and streaks in upper part.			laminations Trrogular thick to medium neutrino
1712.1 1715.0 Oil shale: medium to rare light brownish gray and brow (2.5Y 4/2-5/2 and 5/3, rare 6/2). Very faint to faint fairly smooth to very irregular and distorted laminations, stringers, and streaks; common small loop structures and displacements. Irregular to some sligh irregular, thick to medium parting; irregular fracture Rare small brown to tan crystalline lenses and streaks oil shale: medium to dark brownish gray and brown (2.5 and 10YR 4/2-3/2 and 3/3, rare 2/2). Faint to very fa distorted to fairly smooth streaks and stringers; some fairly large irregular loop structures near top. Irregular thick parting; irregular to rare hackly fracture. Rare small to medium dense brown lenses. 1716.0 1717.4 Oil shale: dark brownish gray and brown to some browning black (10YR 3/2 and 3/3-2/2, some 1/2); some very slig satiny luster. Very faint to faint distorted streaks, stringers, and rare laminations. Irregular thackly fracture. Some thin dense brown dolomite stringers with short vertical bitumen-coated fractures in lower part. Footage remeasured from 1717.0 to 1751.8 feet. Oil shale: medium to dark brownish gray and brown, rare brownish black (10YR and 2.5Y 5/2 and 5/3-3/2 and 3/3, rare 2/2-1/2). Faint to some distinct, slightly irregular thick to rare thin parting; irregular fracture. Some very small brown crystalline lenses near top. Oil shale: medium brownish gray to rare brown and tan, rare dark brownish gray in upper and lower parts (2.5Y 5/2-4/2, rare 5/3-6/3 and 3/2). Moderately distinct to faint, distorted to fairly smooth laminations with common loop structures in upper and lower parts; distorted streaks and stringers in middle part. Trregular to slightly irregular, thick to medium parting; irregular and rare hackly fracture. Common small brown to buff lenses and streaks in upper and.			regular and rare backly fracture for the last
1712.1 1715.0 0il shale: medium to rare light brownish gray and brow (2.5Y 4/2-5/2 and 5/3, rare 6/2). Very faint to faint fairly smooth to very irregular and distorted laminations, stringers, and streaks; common small loop structures and displacements. Irregular to some sligh irregular, thick to medium parting; irregular fracture Rare small brown to tan crystalline lenses and streaks oil shale: medium to dark brownish gray and brown (2.5 and 10YR 4/2-3/2 and 3/3, rare 2/2). Faint to very fa distorted to fairly smooth streaks and stringers; some fairly large irregular loop structures near top. Irregular thick parting; irregular to rare hackly fractu Rare small to medium dense brown lenses. 1716.0 1717.4 0il shale: dark brownish gray and brown to some browni black (10YR 3/2 and 3/3-2/2, some 1/2); some very slig satiny luster. Very faint to faint distorted streaks, stringers, and rare laminations. Irregular to slightly irregular, thick to medium parting; irregular hackly fracture. Some thin dense brown dolomite stringers with short vertical bitumen-coated fractures in lower part. Footage remeasured from 1717.0 to 1751.8 feet. 1717.4 1718.4 0il shale: medium to dark brownish gray and brown, rare brownish black (10YR and 2.5Y 5/2 and 5/3-3/2 and 3/3, rare 2/2-1/2). Faint to some distinct, slightly irregular thick to rare thin parting; irregular fracture Some very small brown crystalline lenses near top. 1718.4 1722.5 0il shale: medium brownish gray to rare brown and tan, rare dark brownish gray in upper and lower parts (2.5Y 5/2-4/2, rare 5/3-6/3 and 3/2). Moderately distinct to faint, distorted to fairly smooth laminations with common loop structures in upper and lower parts; distorted streaks and stringers in middle part. Irregular to slightly irregular, thick to medium parting; irregular to slightly irregular, thick to medium parting; irregular to slightly irregular, thick to medium parting; irregular and rare hackly fracture. Common small brown to buff			stracks
(2.5Y 4/2-5/2 and 5/3, rare 6/2). Very faint to faint fairly smooth to very irregular and distorted laminations, stringers, and streaks; common small loop structures and displacements. Irregular to some sligh irregular, thick to medium parting; irregular fracture Rare small brown to tan crystalline lenses and streaks oil shale: medium to dark brownish gray and brown (2.5 and 10YR 4/2-3/2 and 3/3, rare 2/2). Faint to very fa distorted to fairly smooth streaks and stringers; some fairly large irregular loop structures near top. Irregular thick parting; irregular to rare hackly fractures with lack (10YR 3/2 and 3/3-2/2, some 1/2); some very slig satiny luster. Very faint to faint distorted streaks, stringers, and rare laminations. Irregular to slightly irregular, thick to medium parting; irregular hackly fracture. Some thin dense brown dolomite stringers with short vertical bitumen-coated fractures in lower part. Footage remeasured from 1717.0 to 1751.8 feet. Oil shale: medium to dark brownish gray and brown, rarbrownish black (10YR and 2.5Y 5/2 and 5/3-3/2 and 3/3, rare 2/2-1/2). Faint to some distinct, slightly irregular and distorted laminations; common loop structure. Some very small brown crystalline lenses near top. Oil shale: medium brownish gray to rare brown and tan, rare dark brownish gray in upper and lower parts (2.5Y 5/2-4/2, rare 5/3-6/3 and 3/2). Moderately distinct to faint, distorted to fairly smooth laminations with common loop structures in upper and lower parts; distorted streaks and stringers in middle part. Irregular to slightly irregular, thick to medium parting; irregular to slightly irregular, thick to medium parting; irregular the slightly irregular, thick to medium parting; irregular and rare hackly fracture. Common small brown to buff	1712 1	1715 0	
fairly smooth to very irregular and distorted laminations, stringers, and streaks; common small loop structures and displacements. Irregular to some sligh irregular, thick to medium parting; irregular fracture Rare small brown to tan crystalline lenses and streaks oil shale: medium to dark brownish gray and brown (2.5 and 10YR 4/2-3/2 and 3/3, rare 2/2). Faint to very fa distorted to fairly smooth streaks and stringers; some fairly large irregular loop structures near top. Irregular thick parting; irregular to rare hackly fractures mall to medium dense brown lenses. 1716.0 1717.4 0il shale: dark brownish gray and brown to some browning black (10YR 3/2 and 3/3-2/2, some 1/2); some very slig satiny luster. Very faint to faint distorted streaks, stringers, and rare laminations. Irregular hackly fracture. Some thin dense brown dolomite stringers with short vertical bitumen-coated fractures in lower part. Footage remeasured from 1717.0 to 1751.8 feet. 1717.4 1718.4 0il shale: medium to dark brownish gray and brown, rarbrownish black (10YR and 2.5Y 5/2 and 5/3-3/2 and 3/3, rare 2/2-1/2). Faint to some distinct, slightly irregular thick to rare thin parting; irregular fractures one very small brown crystalline lenses near top. 1718.4 1722.5 0il shale: medium brownish gray to rare brown and tan, rare dark brownish gray in upper and lower parts (2.5Y 5/2-4/2, rare 5/3-6/3 and 3/2). Moderately distinct to faint, distorted to fairly smooth laminations with common loop structures in upper and lower parts; distorted streaks and stringers in middle part. Irregular to slightly irregular, thick to medium parting; irregular to slightly irregular, thick to medium parting; irregular to slightly irregular, thick to medium parting; irregular and rare hackly fracture. Common small brown to buff	48 44 6 4	1113.0	12 57 //2 5/2 and 5/2
tions, stringers, and streaks; common small loop structures and displacements. Irregular to some sligh irregular, thick to medium parting; irregular fracture Rare small brown to tan crystalline lenses and streaks oil shale: medium to dark brownish gray and brown (2.5 and 10YR 4/2-3/2 and 3/3, rare 2/2). Faint to very fa distorted to fairly smooth streaks and stringers; some fairly large irregular loop structures near top. Ir- regular thick parting; irregular to rare hackly fractu Rare small to medium dense brown lenses. 716.0 1717.4 Oil shale: dark brownish gray and brown to some browni black (10YR 3/2 and 3/3-2/2, some 1/2); some very slig satiny luster. Very faint to faint distorted streaks, stringers, and rare laminations. Irregular to slightl irregular, thick to medium parting; irregular hackly fracture. Some thin dense brown dolomite stringers with short vertical bitumen-coated fractures in lower part. Footage remeasured from 1717.0 to 1751.8 feet. Oil shale: medium to dark brownish gray and brown, rar brownish black (10YR and 2.5Y 5/2 and 5/3-3/2 and 3/3, rare 2/2-1/2). Faint to some distinct, slightly ir- regular and distorted laminations; common loop structu- Irregular thick to rare thin parting; irregular fractu- Some very small brown crystalline lenses near top. Oil shale: medium brownish gray to rare brown and tan, rare dark brownish gray in upper and lower parts (2.5Y 5/2-4/2, rare 5/3-6/3 and 3/2). Moderately distinct to faint, distorted to fairly smooth laminations with common loop structures in upper and lower parts; dis- torted streaks and stringers in middle part. Irregular to slightly irregular, thick to medium parting; irregular and rare hackly fracture. Common small brown to buff lenses and streaks in upper part. A very irregular th			(2.31 4/2-3/2 and 3/3, rare 6/2). Very faint to faint,
irregular, thick to medium parting; irregular fracture Rare small brown to tan crystalline lenses and streaks oil shale: medium to dark brownish gray and brown (2.5 and 10YR 4/2-3/2 and 3/3, rare 2/2). Faint to very fa distorted to fairly smooth streaks and stringers; some fairly large irregular loop structures near top. Irregular thick parting; irregular to rare hackly fractu Rare small to medium dense brown lenses. 1716.0 1717.4 0il shale: dark brownish gray and brown to some browni black (10YR 3/2 and 3/3-2/2, some 1/2); some very slig satiny luster. Very faint to faint distorted streaks, stringers, and rare laminations. Irregular to slightly irregular, thick to medium parting; irregular hackly fracture. Some thin dense brown dolomite stringers with short vertical bitumen-coated fractures in lower part. Footage remeasured from 1717.0 to 1751.8 feet. 1717.4 1718.4 0il shale: medium to dark brownish gray and brown, rarbrownish black (10TR and 2.5Y 5/2 and 5/3-3/2 and 3/3, rare 2/2-1/2). Faint to some distinct, slightly irregular and distorted laminations; common loop structures are dark brownish gray to rare brown and tan, rare dark brownish gray in upper and lower parts (2.5Y 5/2-4/2, rare 5/3-6/3 and 3/2). Moderately distinct to faint, distorted to fairly smooth laminations with common loop structures in upper and lower parts; distorted streaks and stringers in middle part. Irregular to slightly irregular, thick to medium parting; irreg			tions smooth to very irregular and distorted lamina-
irregular, thick to medium parting; irregular fracture Rare small brown to tan crystalline lenses and streaks and 10YR 4/2-3/2 and 3/3, rare 2/2). Faint to very fa distorted to fairly smooth streaks and stringers; some fairly large irregular loop structures near top. Irregular thick parting; irregular to rare hackly fracturate Rare small to medium dense brown lenses. 1716.0 1717.4 Oil shale: dark brownish gray and brown to some browniblack (10YR 3/2 and 3/3-2/2, some 1/2); some very slig satiny luster. Very faint to faint distorted streaks, stringers, and rare laminations. Irregular to slightly irregular, thick to medium parting; irregular hackly fracture. Some thin dense brown dolomite stringers with short vertical bitumen-coated fractures in lower part. Footage remeasured from 1717.0 to 1751.8 feet. Oil shale: medium to dark brownish gray and brown, rare brownish black (10YR and 2.5Y 5/2 and 5/3-3/2 and 3/3, rare 2/2-1/2). Faint to some distinct, slightly irregular and distorted laminations; common loop structure Irregular thick to rare thin parting; irregular fractures Some very small brown crystalline lenses near top. Oil shale: medium brownish gray to rare brown and tan, rare dark brownish gray in upper and lower parts (2.5Y 5/2-4/2, rare 5/3-6/3 and 3/2). Moderately distinct to faint, distorted to fairly smooth laminations with common loop structures in upper and lower parts; distorted streaks and stringers in middle part. Irregular to slightly irregular, thick to medium parting; irregular to slightly irregular, thick to medium parting; irregular to slightly irregular, thick to medium parting; irregular do slightly irregular, thick to medium parting; irregular to slightly irregular, thick to medium parting; irregular to slightly irregular, thick to medium parting; irregular do slightly irregular, thick to medium parting; irregular to slightly irregular. A very irregular the		. •	tions, stringers, and streaks; common small loop
1715.0 1716.0 1716.0 0il shale: medium to dark brownish gray and brown (2.5 and 10 yr 4/2-3/2 and 3/3, rare 2/2). Faint to very fa distorted to fairly smooth streaks and stringers; some fairly large irregular loop structures near top. Irregular thick parting; irregular to rare hackly fractu Rare small to medium dense brown lenses. 1716.0 1717.4 0il shale: dark brownish gray and brown to some browni black (10 yr 3/2 and 3/3-2/2, some 1/2); some very slig satiny luster. Very faint to faint distorted streaks, stringers, and rare laminations. Irregular to slightly irregular, thick to medium parting; irregular hackly fracture. Some thin dense brown dolomite stringers with short vertical bitumen-coated fractures in lower part. Footage remeasured from 1717.0 to 1751.8 feet. 1717.4 1718.4 0il shale: medium to dark brownish gray and brown, rare brownish black (10 yr and 2.5 yr 5/2 and 5/3-3/2 and 3/3, rare 2/2-1/2). Faint to some distinct, slightly irregular and distorted laminations; common loop structures in lower ysmall brown crystalline lenses near top. 1718.4 1722.5 0il shale: medium brownish gray to rare brown and tan, rare dark brownish gray in upper and lower parts (2.5 yr 5/2-4/2, rare 5/3-6/3 and 3/2). Moderately distinct to faint, distorted to fairly smooth laminations with common loop structures in upper and lower parts; distorted streaks and stringers in middle part. Irregular to slightly irregular, thick to medium parting; irregular and rare hackly fracture. Common small brown to buff lenses and streaks in upper part. A very irregular th			structures and displacements. Irregular to some slightly
oil shale: medium to dark brownish gray and brown (2.5 and 10YR 4/2-3/2 and 3/3, rare 2/2). Faint to very fa distorted to fairly smooth streaks and stringers; some fairly large irregular loop structures near top. Irregular thick parting; irregular to rare hackly fractures near thick parting; irregular to rare hackly fractures near top. 1717.4 oil shale: dark brownish gray and brown to some brownit black (10YR 3/2 and 3/3-2/2, some 1/2); some very slig satiny luster. Very faint to faint distorted streaks, stringers, and rare laminations. Irregular to slightly irregular, thick to medium parting; irregular hackly fracture. Some thin dense brown dolomite stringers with short vertical bitumen-coated fractures in lower part. Footage remeasured from 1717.0 to 1751.8 feet. oil shale: medium to dark brownish gray and brown, rare brownish black (10YR and 2.5Y 5/2 and 5/3-3/2 and 3/3, rare 2/2-1/2). Faint to some distinct, slightly irregular thick to rare thin parting; irregular fractures some very small brown crystalline lenses near top. Oil shale: medium brownish gray to rare brown and tan, rare dark brownish gray in upper and lower parts (2.5Y 5/2-4/2, rare 5/3-6/3 and 3/2). Moderately distinct to faint, distorted to fairly smooth laminations with common loop structures in upper and lower parts; distorted streaks and stringers in middle part. Irregular to slightly irregular, thick to medium parting; irregular and rare hackly fracture. Common small brown to buff lenses and streaks in upper part. A very irregular the lenses and streaks in upper part.		•	irregular, thick to medium parting; irregular fracture.
and 10YR 4/2-3/2 and 3/3, rare 2/2). Faint to very fa distorted to fairly smooth streaks and stringers; some fairly large irregular loop structures near top. Irregular thick parting; irregular to rare hackly fractured Rare small to medium dense brown lenses. 1716.0 1717.4 0il shale: dark brownish gray and brown to some browning black (10YR 3/2 and 3/3-2/2, some 1/2); some very sligs satiny luster. Very faint to faint distorted streaks, stringers, and rare laminations. Irregular to slightly irregular, thick to medium parting; irregular hackly fracture. Some thin dense brown dolomite stringers with short vertical bitumen-coated fractures in lower part. Footage remeasured from 1717.0 to 1751.8 feet. 1717.4 1718.4 0il shale: medium to dark brownish gray and brown, rare brownish black (10YR and 2.5Y 5/2 and 5/3-3/2 and 3/3, rare 2/2-1/2). Faint to some distinct, slightly irregular and distorted laminations; common loop structured Irregular thick to rare thin parting; irregular fractured Some very small brown crystalline lenses near top. 1718.4 1722.5 0il shale: medium brownish gray to rare brown and tan, rare dark brownish gray in upper and lower parts (2.5Y 5/2-4/2, rare 5/3-6/3 and 3/2). Moderately distinct to faint, distorted to fairly smooth laminations with common loop structures in upper and lower parts; distorted streaks and stringers in middle part. Irregular to slightly irregular, thick to medium parting; irregular hence and streaks and streaks in upper part. A very irregular the lenses and streaks in upper part.	1715 0	1716.0	Rare small brown to tan crystalline lenses and streaks.
distorted to fairly smooth streaks and stringers; some fairly large irregular loop structures near top. Irregular thick parting; irregular to rare hackly fractur Rare small to medium dense brown lenses. 1716.0 1717.4 0il shale: dark brownish gray and brown to some browning black (10YR 3/2 and 3/3-2/2, some 1/2); some very slig satiny luster. Very faint to faint distorted streaks, stringers, and rare laminations. Irregular to slightly irregular, thick to medium parting; irregular hackly fracture. Some thin dense brown dolomite stringers with short vertical bitumen-coated fractures in lower part. Footage remeasured from 1717.0 to 1751.8 feet. 1717.4 1718.4 0il shale: medium to dark brownish gray and brown, rare brownish black (10YR and 2.5Y 5/2 and 5/3-3/2 and 3/3, rare 2/2-1/2). Faint to some distinct, slightly irregular and distorted laminations; common loop structured Irregular thick to rare thin parting; irregular fractures Some very small brown crystalline lenses near top. 1718.4 1722.5 0il shale: medium brownish gray to rare brown and tan, rare dark brownish gray in upper and lower parts (2.5Y 5/2-4/2, rare 5/3-6/3 and 3/2). Moderately distinct to faint, distorted to fairly smooth laminations with common loop structures in upper and lower parts; distorted streaks and stringers in middle part. Irregular to slightly irregular, thick to medium parting; irregular and rare hackly fracture. Common small brown to buff lenses and streaks in upper part. A very irregular the lenses and streaks in upper part.	1/15.0	1/10.0	Oll shale: medium to dark brownish gray and brown (2.5Y
fairly large irregular loop structures near top. Irregular thick parting; irregular to rare hackly fractures mall to medium dense brown lenses. 1716.0 1717.4 0il shale: dark brownish gray and brown to some browni black (10YR 3/2 and 3/3-2/2, some 1/2); some very slig satiny luster. Very faint to faint distorted streaks, stringers, and rare laminations. Irregular to slightly irregular, thick to medium parting; irregular hackly fracture. Some thin dense brown dolomite stringers with short vertical bitumen-coated fractures in lower part. Footage remeasured from 1717.0 to 1751.8 feet. 1717.4 1718.4 0il shale: medium to dark brownish gray and brown, rarbrownish black (10YR and 2.5Y 5/2 and 5/3-3/2 and 3/3, rare 2/2-1/2). Faint to some distinct, slightly irregular and distorted laminations; common loop structures from thick to rare thin parting; irregular fractures some very small brown crystalline lenses near top. 1718.4 1722.5 0il shale: medium brownish gray to rare brown and tan, rare dark brownish gray in upper and lower parts (2.5Y 5/2-4/2, rare 5/3-6/3 and 3/2). Moderately distinct to faint, distorted to fairly smooth laminations with common loop structures in upper and lower parts; distorted streaks and stringers in middle part. Irregular to slightly irregular, thick to medium parting; irregular and rare hackly fracture. Common small brown to buff lenses and streaks in upper part. A very irregular the lenses and streaks in upper part.			and $10YR$ $4/2-3/2$ and $3/3$, rare $2/2$). Faint to very faint
regular thick parting; irregular to rare hackly fracture Rare small to medium dense brown tenses. Oil shale: dark brownish gray and brown to some browning black (10YR 3/2 and 3/3-2/2, some 1/2); some very slig satiny luster. Very faint to faint distorted streaks, stringers, and rare laminations. Irregular to slightly irregular, thick to medium parting; irregular hackly fracture. Some thin dense brown dolomite stringers with short vertical bitumen-coated fractures in lower part. Footage remeasured from 1717.0 to 1751.8 feet. Oil shale: medium to dark brownish gray and brown, rare brownish black (10YR and 2.5Y 5/2 and 5/3-3/2 and 3/3, rare 2/2-1/2). Faint to some distinct, slightly irregular and distorted laminations; common loop structure. Irregular thick to rare thin parting; irregular fractures some very small brown crystalline lenses near top. Oil shale: medium brownish gray to rare brown and tan, rare dark brownish gray in upper and lower parts (2.5Y 5/2-4/2, rare 5/3-6/3 and 3/2). Moderately distinct to faint, distorted to fairly smooth laminations with common loop structures in upper and lower parts; distorted streaks and stringers in middle part. Irregular to slightly irregular, thick to medium parting; irregular the hackly fracture. Common small brown to buff lenses and streaks in upper part. A very irregular the		•	distorted to fairly smooth streaks and stringers; some
Rare small to medium dense brown lenses. Oil shale: dark brownish gray and brown to some browni black (10YR 3/2 and 3/3-2/2, some 1/2); some very slig satiny luster. Very faint to faint distorted streaks, stringers, and rare laminations. Irregular to slightly irregular, thick to medium parting; irregular hackly fracture. Some thin dense brown dolomite stringers with short vertical bitumen-coated fractures in lower part. Footage remeasured from 1717.0 to 1751.8 feet. Oil shale: medium to dark brownish gray and brown, rare brownish black (10YR and 2.5Y 5/2 and 5/3-3/2 and 3/3, rare 2/2-1/2). Faint to some distinct, slightly irregular and distorted laminations; common loop structured Irregular thick to rare thin parting; irregular fractured Some very small brown crystalline lenses near top. Oil shale: medium brownish gray to rare brown and tan, rare dark brownish gray in upper and lower parts (2.5Y 5/2-4/2, rare 5/3-6/3 and 3/2). Moderately distinct the faint, distorted to fairly smooth laminations with common loop structures in upper and lower parts; distorted streaks and stringers in middle part. Irregular to slightly irregular, thick to medium parting; irregular the streaks and streaks in upper part. A very irregular the lenses and streaks in upper part. A very irregular the			fairly large irregular loop structures near top. Ir-
Rare small to medium dense brown lenses. Oil shale: dark brownish gray and brown to some browni black (10YR 3/2 and 3/3-2/2, some 1/2); some very slig satiny luster. Very faint to faint distorted streaks, stringers, and rare laminations. Irregular to slightly irregular, thick to medium parting; irregular hackly fracture. Some thin dense brown dolomite stringers with short vertical bitumen-coated fractures in lower part. Footage remeasured from 1717.0 to 1751.8 feet. Oil shale: medium to dark brownish gray and brown, rare brownish black (10YR and 2.5Y 5/2 and 5/3-3/2 and 3/3, rare 2/2-1/2). Faint to some distinct, slightly irregular and distorted laminations; common loop structured Irregular thick to rare thin parting; irregular fractured Some very small brown crystalline lenses near top. Oil shale: medium brownish gray to rare brown and tan, rare dark brownish gray in upper and lower parts (2.5Y 5/2-4/2, rare 5/3-6/3 and 3/2). Moderately distinct the faint, distorted to fairly smooth laminations with common loop structures in upper and lower parts; distorted streaks and stringers in middle part. Irregular to slightly irregular, thick to medium parting; irregular the streaks and streaks in upper part. A very irregular the lenses and streaks in upper part. A very irregular the	•		regular thick parting; irregular to rare hackly fracture.
black (10YR 3/2 and 3/3-2/2, some 1/2); some very slig satiny luster. Very faint to faint distorted streaks, stringers, and rare laminations. Irregular to slightly irregular, thick to medium parting; irregular hackly fracture. Some thin dense brown dolomite stringers with short vertical bitumen-coated fractures in lower part. Footage remeasured from 1717.0 to 1751.8 feet. 1717.4 1718.4 Oil shale: medium to dark brownish gray and brown, rare brownish black (10YR and 2.5Y 5/2 and 5/3-3/2 and 3/3, rare 2/2-1/2). Faint to some distinct, slightly irregular and distorted laminations; common loop structured Irregular thick to rare thin parting; irregular fractures Some very small brown crystalline lenses near top. 1718.4 1722.5 Oil shale: medium brownish gray to rare brown and tan, rare dark brownish gray in upper and lower parts (2.5Y 5/2-4/2, rare 5/3-6/3 and 3/2). Moderately distinct to faint, distorted to fairly smooth laminations with common loop structures in upper and lower parts; distorted streaks and stringers in middle part. Irregular to slightly irregular, thick to medium parting; irregular thackly fracture. Common small brown to buff lenses and streaks in upper part. A very irregular the			Rare small to medium dense brown lenses.
satiny luster. Very faint to faint distorted streaks, stringers, and rare laminations. Irregular to slightly irregular, thick to medium parting; irregular hackly fracture. Some thin dense brown dolomite stringers with short vertical bitumen-coated fractures in lower part. Footage remeasured from 1717.0 to 1751.8 feet. 1717.4 1718.4 0il shale: medium to dark brownish gray and brown, rare brownish black (10 R and 2.5 Y 5/2 and 5/3-3/2 and 3/3, rare 2/2-1/2). Faint to some distinct, slightly irregular and distorted laminations; common loop structured Irregular thick to rare thin parting; irregular fractured Some very small brown crystalline lenses near top. 1718.4 1722.5 0il shale: medium brownish gray to rare brown and tan, rare dark brownish gray in upper and lower parts (2.5 Y 5/2-4/2, rare 5/3-6/3 and 3/2). Moderately distinct to faint, distorted to fairly smooth laminations with common loop structures in upper and lower parts; distorted streaks and stringers in middle part. Irregular to slightly irregular, thick to medium parting; irregular thick to medium parting; irregular thick to medium parting; irregular thick to medium parting.	1716.0	1717.4	Oil shale: dark brownish gray and brown to some brownish
sating luster. Very faint to faint distorted streaks, stringers, and rare laminations. Irregular to slightly irregular, thick to medium parting; irregular hackly fracture. Some thin dense brown dolomite stringers with short vertical bitumen-coated fractures in lower part. Footage remeasured from 1717.0 to 1751.8 feet. 1717.4 1718.4 Oil shale: medium to dark brownish gray and brown, rare brownish black (10YR and 2.5Y 5/2 and 5/3-3/2 and 3/3, rare 2/2-1/2). Faint to some distinct, slightly irregular and distorted laminations; common loop structured laminations; common loop structured laminations in the some very small brown crystalline lenses near top. 1718.4 1722.5 Oil shale: medium brownish gray to rare brown and tan, rare dark brownish gray in upper and lower parts (2.5Y 5/2-4/2, rare 5/3-6/3 and 3/2). Moderately distinct to faint, distorted to fairly smooth laminations with common loop structures in upper and lower parts; distorted streaks and stringers in middle part. Irregular to slightly irregular, thick to medium parting; irregular dare hackly fracture. Common small brown to buff lenses and streaks in upper part. A very irregular the			black (10YR $3/2$ and $3/3-2/2$, some $1/2$); some very slight
stringers, and rare laminations. Irregular to slightly irregular, thick to medium parting; irregular hackly fracture. Some thin dense brown dolomite stringers with short vertical bitumen-coated fractures in lower part. Footage remeasured from 1717.0 to 1751.8 feet. 1717.4 1718.4 Oil shale: medium to dark brownish gray and brown, rar brownish black (10YR and 2.5Y 5/2 and 5/3-3/2 and 3/3, rare 2/2-1/2). Faint to some distinct, slightly irregular and distorted laminations; common loop structured Irregular thick to rare thin parting; irregular fractured Some very small brown crystalline lenses near top. 1718.4 1722.5 Oil shale: medium brownish gray to rare brown and tan, rare dark brownish gray in upper and lower parts (2.5Y 5/2-4/2, rare 5/3-6/3 and 3/2). Moderately distinct to faint, distorted to fairly smooth laminations with common loop structures in upper and lower parts; distorted streaks and stringers in middle part. Irregular to slightly irregular, thick to medium parting; irregular dare hackly fracture. Common small brown to buff lenses and streaks in upper part. A very irregular the			satiny luster. Very faint to faint distorted streaks.
fregular, thick to medium parting; irregular hackly fracture. Some thin dense brown dolomite stringers with short vertical bitumen-coated fractures in lower part. Footage remeasured from 1717.0 to 1751.8 feet. 1717.4 1718.4 Oil shale: medium to dark brownish gray and brown, rare brownish black (10 km and 2.5 ym 5/2 and 5/3-3/2 and 3/3, rare 2/2-1/2). Faint to some distinct, slightly irregular and distorted laminations; common loop structured Irregular thick to rare thin parting; irregular fractured Some very small brown crystalline lenses near top. 1718.4 1722.5 Oil shale: medium brownish gray to rare brown and tan, rare dark brownish gray in upper and lower parts (2.5 ym 5/2-4/2, rare 5/3-6/3 and 3/2). Moderately distinct to faint, distorted to fairly smooth laminations with common loop structures in upper and lower parts; distorted streaks and stringers in middle part. Irregular to slightly irregular, thick to medium parting; irregular to slightly irregular, thick to medium parting; irregular and rare hackly fracture. Common small brown to buff lenses and streaks in upper part. A very irregular the		•	stringers, and rare laminations. Irregular to slightly
fracture. Some thin dense brown dolomite stringers with short vertical bitumen-coated fractures in lower part. Footage remeasured from 1717.0 to 1751.8 feet. 1717.4 1718.4 Oil shale: medium to dark brownish gray and brown, rare brownish black (10YR and 2.5Y 5/2 and 5/3-3/2 and 3/3, rare 2/2-1/2). Faint to some distinct, slightly irregular and distorted laminations; common loop structured laminations; irregular fractured Some very small brown crystalline lenses near top. 1718.4 1722.5 Oil shale: medium brownish gray to rare brown and tan, rare dark brownish gray in upper and lower parts (2.5Y 5/2-4/2, rare 5/3-6/3 and 3/2). Moderately distinct to faint, distorted to fairly smooth laminations with common loop structures in upper and lower parts; distorted streaks and stringers in middle part. Irregular to slightly irregular, thick to medium parting; irregular the slightly irregular, thick to medium parting; irregular and rare hackly fracture. Common small brown to buff lenses and streaks in upper part. A very irregular the			irregular, thick to medium parting: irregular hackly
with short vertical bitumen-coated fractures in lower part. Footage remeasured from 1717.0 to 1751.8 feet. 1717.4 1718.4 Oil shale: medium to dark brownish gray and brown, rare brownish black (10YR and 2.5Y 5/2 and 5/3-3/2 and 3/3, rare 2/2-1/2). Faint to some distinct, slightly irregular and distorted laminations; common loop structured some very small brown crystalline lenses near top. 1718.4 1722.5 Oil shale: medium brownish gray to rare brown and tan, rare dark brownish gray in upper and lower parts (2.5Y 5/2-4/2, rare 5/3-6/3 and 3/2). Moderately distinct to faint, distorted to fairly smooth laminations with common loop structures in upper and lower parts; distorted streaks and stringers in middle part. Irregular to slightly irregular, thick to medium parting; irregular and rare hackly fracture. Common small brown to buff lenses and streaks in upper part. A very irregular the		•	fracture. Some thin dense brown dolomite stringers
Footage remeasured from 1717.0 to 1751.8 feet. 1717.4 1718.4 0il shale: medium to dark brownish gray and brown, rare brownish black (10YR and 2.5Y 5/2 and 5/3-3/2 and 3/3, rare 2/2-1/2). Faint to some distinct, slightly irregular and distorted laminations; common loop structured and to the some very small brown crystalline lenses near top. 1718.4 1722.5 0il shale: medium brownish gray to rare brown and tan, rare dark brownish gray in upper and lower parts (2.5Y 5/2-4/2, rare 5/3-6/3 and 3/2). Moderately distinct to faint, distorted to fairly smooth laminations with common loop structures in upper and lower parts; distorted streaks and stringers in middle part. Irregular to slightly irregular, thick to medium parting; irregular and rare hackly fracture. Common small brown to buff lenses and streaks in upper part. A very irregular the		•	with short vertical bitumen-coated fractures in lower
1717.4 1718.4 Oil shale: medium to dark brownish gray and brown, rare brownish black (10YR and 2.5Y 5/2 and 5/3-3/2 and 3/3, rare 2/2-1/2). Faint to some distinct, slightly irregular and distorted laminations; common loop structured and thick to rare thin parting; irregular fractured some very small brown crystalline lenses near top. Oil shale: medium brownish gray to rare brown and tan, rare dark brownish gray in upper and lower parts (2.5Y 5/2-4/2, rare 5/3-6/3 and 3/2). Moderately distinct to faint, distorted to fairly smooth laminations with common loop structures in upper and lower parts; distorted streaks and stringers in middle part. Irregulate to slightly irregular, thick to medium parting; irregular to slightly irregular, thick to medium parting; irregular and rare hackly fracture. Common small brown to buff lenses and streaks in upper part. A very irregular the			part.
1717.4 1718.4 Oil shale: medium to dark brownish gray and brown, rare brownish black (10YR and 2.5Y 5/2 and 5/3-3/2 and 3/3, rare 2/2-1/2). Faint to some distinct, slightly irregular and distorted laminations; common loop structured and thick to rare thin parting; irregular fractured some very small brown crystalline lenses near top. 1718.4 1722.5 Oil shale: medium brownish gray to rare brown and tan, rare dark brownish gray in upper and lower parts (2.5Y 5/2-4/2, rare 5/3-6/3 and 3/2). Moderately distinct to faint, distorted to fairly smooth laminations with common loop structures in upper and lower parts; distorted streaks and stringers in middle part. Irregulate to slightly irregular, thick to medium parting; irregular and rare hackly fracture. Common small brown to buff lenses and streaks in upper part. A very irregular the	Footage	remeasured	from 1717.0 to 1751.8 feet.
brownish black (10YR and 2.5Y 5/2 and 5/3-3/2 and 3/3, rare 2/2-1/2). Faint to some distinct, slightly irregular and distorted laminations; common loop structured laminations; common loop structured laminations; irregular fractured some very small brown crystalline lenses near top. 1718.4 1722.5 0il shale: medium brownish gray to rare brown and tan, rare dark brownish gray in upper and lower parts (2.5Y 5/2-4/2, rare 5/3-6/3 and 3/2). Moderately distinct to faint, distorted to fairly smooth laminations with common loop structures in upper and lower parts; distorted streaks and stringers in middle part. Irregular to slightly irregular, thick to medium parting; irregular to slightly irregular, thick to medium parting; irregular and rare hackly fracture. Common small brown to buff lenses and streaks in upper part. A very irregular the	1717.4	1718.4	Oil shale: medium to dark brownish gray and brown, rare
rare 2/2-1/2). Faint to some distinct, slightly irregular and distorted laminations; common loop structured laminations; common loop structured laminations; irregular fractured some very small brown crystalline lenses near top. 1718.4 1722.5 Oil shale: medium brownish gray to rare brown and tan, rare dark brownish gray in upper and lower parts (2.5Y 5/2-4/2, rare 5/3-6/3 and 3/2). Moderately distinct to faint, distorted to fairly smooth laminations with common loop structures in upper and lower parts; distorted streaks and stringers in middle part. Irregulated to slightly irregular, thick to medium parting; irregular to slightly irregular, thick to medium parting; irregular and rare hackly fracture. Common small brown to buff lenses and streaks in upper part. A very irregular the			brownish black (10YR and 2.5Y 5/2 and 5/3-3/2 and 3/3
regular and distorted laminations; common loop structure. Irregular thick to rare thin parting; irregular fracture. Some very small brown crystalline lenses near top. Oil shale: medium brownish gray to rare brown and tan, rare dark brownish gray in upper and lower parts (2.5Y 5/2-4/2, rare 5/3-6/3 and 3/2). Moderately distinct to faint, distorted to fairly smooth laminations with common loop structures in upper and lower parts; distorted streaks and stringers in middle part. Irregular to slightly irregular, thick to medium parting; irregular and rare hackly fracture. Common small brown to buff lenses and streaks in upper part. A very irregular the			rare 2/2-1/2). Faint to some distinct, slightly ir-
Some very small brown crystalline lenses near top. 1718.4 1722.5 Oil shale: medium brownish gray to rare brown and tan, rare dark brownish gray in upper and lower parts (2.5Y 5/2-4/2, rare 5/3-6/3 and 3/2). Moderately distinct to faint, distorted to fairly smooth laminations with common loop structures in upper and lower parts; distorted streaks and stringers in middle part. Irregulate to slightly irregular, thick to medium parting; irregular and rare hackly fracture. Common small brown to buff lenses and streaks in upper part. A very irregular the			regular and distorted laminations: common loop structures
1718.4 1722.5 Oil shale: medium brownish gray to rare brown and tan, rare dark brownish gray in upper and lower parts (2.5Y 5/2-4/2, rare 5/3-6/3 and 3/2). Moderately distinct to faint, distorted to fairly smooth laminations with common loop structures in upper and lower parts; distorted streaks and stringers in middle part. Irregulate to slightly irregular, thick to medium parting; irregular and rare hackly fracture. Common small brown to buff lenses and streaks in upper part. A very irregular the			Irregular thick to rare thin parting: irregular fracture
1718.4 1722.5 Oil shale: medium brownish gray to rare brown and tan, rare dark brownish gray in upper and lower parts (2.5Y 5/2-4/2, rare 5/3-6/3 and 3/2). Moderately distinct to faint, distorted to fairly smooth laminations with common loop structures in upper and lower parts; distorted streaks and stringers in middle part. Irregulated to slightly irregular, thick to medium parting; irregular and rare hackly fracture. Common small brown to buff lenses and streaks in upper part. A very irregular the			Some very small brown crystalline lenses near top
rare dark brownish gray in upper and lower parts (2.5Y 5/2-4/2, rare 5/3-6/3 and 3/2). Moderately distinct to faint, distorted to fairly smooth laminations with common loop structures in upper and lower parts; distorted streaks and stringers in middle part. Irregulated to slightly irregular, thick to medium parting; irregular and rare hackly fracture. Common small brown to buff lenses and streaks in upper part. A very irregular the	1718.4	1722.5	Oil shale: medium brownish gray to rare brown and tan
5/2-4/2, rare 5/3-6/3 and 3/2). Moderately distinct to faint, distorted to fairly smooth laminations with common loop structures in upper and lower parts; distorted streaks and stringers in middle part. Trregular to slightly irregular, thick to medium parting; irregulard rare hackly fracture. Common small brown to buff lenses and streaks in upper part. A very irregular the			rare dark brownish gray in upper and lower parts (2 5y
faint, distorted to fairly smooth laminations with common loop structures in upper and lower parts; distorted streaks and stringers in middle part. Irregulated to slightly irregular, thick to medium parting; irregular and rare hackly fracture. Common small brown to buff lenses and streaks in upper part. A very irregular the			5/2-4/2, rare $5/3-6/3$ and $3/2$). Moderately distinct to
common loop structures in upper and lower parts; distorted streaks and stringers in middle part. Irregulate to slightly irregular, thick to medium parting; irregular and rare hackly fracture. Common small brown to buff lenses and streaks in upper part. A very irregular the			faint, distorted to fairly smooth laminations with
torted streaks and stringers in middle part. Irregular to slightly irregular, thick to medium parting; irregular and rare hackly fracture. Common small brown to buff lenses and streaks in upper part. A very irregular th			common loop structures in upper and leaves south dis
to slightly irregular, thick to medium parting; irregular and rare hackly fracture. Common small brown to buff lenses and streaks in upper part. A very irregular the			torted streaks and stringers in middle next. Transmitted
and rare hackly fracture. Common small brown to buff lenses and streaks in upper part. A very irregular the			to slightly irregular thick to making part. Irregular
lenses and streaks in upper part. A very irregular the			and rare backly fractions demonstrate in medium parting; irregular
gray to well and a series of the part. A very irregular the			lenses and stroaks in which are a series of the series are series in the series of the
			gray to volley ab error days. A very irregular thin
gray to yellowish gray, dense to silty-textured strings			gray to yellowish gray, dense to silty-textured stringer
with some fine shale stringers at 1721.9 feet.			with some time shale stringers at 1721.9 feet.

Illustration No. SER-3891P (Sheet 17 of 57)

Core samples from Equity Oil Company's Oldland Corehole 3--Continued

1740.0 0il shale; dark brownish gray to brownish black and rare dark brown (10YR 2/2-1/2, rare 3/2-3/3). Very faint fairly smooth streaked bedding. Slightly irregular to irregular, thick to medium parting; irregular to some coarse hackly fracture. An irregular diagonal glossy shear surface with slickensides near middle. 1740.0 1741.4 0il shale; dark brownish gray (10YR 2/2-3/2). Very faint smooth streaked bedding. Regular to slightly irregular, thick to rare thin shaly parting; irregular to very hackly fracture. Very rare fine vitreous black organic streaks. A diagonal shear surface with slickensides at base. 1741.4 1744.4 0il shale; dark and some medium brownish gray (10YR 3/2-2/2, some 4/2). Very faint smooth to distorted and displaced streaked bedding and some laminations. Regular to some irregular, thick to thin shaly parting; coarse to fine irregular hackly fracture. Some to common small brown pyritic spots and fine streaks. Rare l-inch faintly laminated dolomite bands with short bitumen-stained fractures. 1744.0 1746.4 0il shale; medium to dark brownish gray (10YR 4/2-3/2, some 2/2). Faint smooth to distorted laminations and streaked bedding. Regular to rare irregular, thick to medium shaly parting; irregular hackly fracture. Some thin to medium brownish gray dolomite bands with short vertical fractures in upper part. Some fine brown streaks with rare pyrite in lower part. Thin faintly streaked gray stringers at 1745.8 and 1746.3 feet. 1746.4 1748.5 0il shale; medium to dark brownish gray (2.5Y 2-3/2, some 4/1 lower part). Faint to very faint slightly distorted laminations and some streaked bedding, Slightly irregular to some irregular, thick to rare thin shaly parting; irregular fracture. 1749.8 1749.8 0il shale; medium and rare dark brownish gray (2.5Y 5/2-4/2, rare 3/2). Faint fairly smooth to irregular, distorted and displaced laminations and some very faint streaked bedding. Regular to some irregular, thick to medium shaly parting; irregular fracture. 1749.8 1759.0 0il shale and marlstone: medi	From	То	Description
faint fairly smooth streaked bedding. Slightly irregular to irregular, thick to medium parting; irregular to some coarse hackly fracture. An irregular diagonal glossy shear surface with slickensides near middle. 1740.0 1741.4 01. shale: dark brownish gray (10YR 2/2-3/2). Very faint smooth streaked bedding. Regular to slightly irregular, thick to rare thin shaly parting; irregular to very hackly fracture. Very rare fine vitreous black organic streaks. A diagonal shear surface with slickensides at base. 1741.4 1744.4 01. shale: dark and some medium brownish gray (10YR 3/2-2/2, some 4/2). Very faint smooth to distorted and displaced streaked bedding and some laminations. Regular to some irregular, thick to thin shaly parting; coarse to fine irregular hackly fracture. Some to common small brown pyritic spots and fine streaks. Rare 1-inch faintly laminated dolomite bands with short bitumen-stained fractures. 1744.0 1746.4 01. shale: medium to dark brownish gray (10YR 4/2-3/2, some 2/2). Faint smooth to distorted laminations and streaked bedding. Regular to rare irregular, thick to medium shaly parting; irregular hackly fracture. Some thin to medium brownish gray dolomite bands with short vertical fractures in upper part. Some fine brown streaks with rare pyrite in lower part. Thin faintly streaked gray stringers at 1745.8 and 1746.3 feet. 1746.4 1748.5 01. shale: medium to dark brownish gray (2.5Y 4/2-3/2, some 4/1 lower part). Faint to overy faint sightly distorted laminations and some streaked bedding. Slightly irregular to some very irregular, thick to rare thin shaly parting; irregular fracture. 1749.8 1749.8 1759.0 01. shale: medium and rere dark brownish gray (2.5Y 5/2-4/2, rare 3/2). Faint fairly smooth to irregular, distorted and displaced laminations and some very faint streaked bedding. Regular to some irregular, thick to medium shaly parting; irregular fracture. Rare fine gray streaks and very small buff pyritic blebs in lower part. 1749.8 1759.0 01. shale and marlstone: medium to light brownish gra	1737.6	1740.0	Oil shale: dark brownish gray to brownish black and
faint fairly smooth streaked bedding. Slightly irregular to irregular, thick to medium parting; irregular to some coarse hackly fracture. An irregular diagonal glossy shear surface with slickensides near middle. 1740.0 1741.4 0il shale: dark brownish gray (10YR 2/2-3/2). Very faint smooth streaked bedding. Regular to slightly irregular, thick to rare thin shaly parting; irregular to very hackly fracture. Very rare fine vitreous black organic streaks. A diagonal shear surface with slickensides at base. 1741.4 1744.4 0il shale: dark and some medium brownish gray (10YR 3/2-2/2, some 4/2). Very faint smooth to distorted and displaced streaked bedding and some laminations. Regular to some irregular, thick to thin shaly parting; coarse to fine irregular hackly fracture. Some to common small brown pyritic spots and fine streaks. Rare 1-inch faintly laminated dolomite bands with short bitumen-stained fractures. 1744.0 1746.4 0il shale: medium to dark brownish gray (10YR 4/2-3/2, some 2/2). Faint smooth to distorted laminations and streaked bedding. Regular to rare irregular, thick to medium shaly parting; irregular hackly fracture. Some thin to medium brownish gray dolomite bands with short vertical, fractures in upper part. Some fine brown streaks with rare pyrite in lower part. Thin faintly streaked gray stringers at 1745.8 and 1746.3 feet. 1748.5 0il shale: medium to dark brownish gray (2.5Y 4/2-3/2, some 4/1 lower part). Faint to very faint slightly distorted laminations and some streaked bedding. Slightly irregular to some very irregular, thick to rare thin shaly parting; irregular fracture. 1748.5 1749.8 1749.8 0il shale: medium and rare dark brownish gray (2.5Y 5/2-4/2, rare 3/2). Faint fairly smooth to irregular, distorted and displaced laminations and some very faint streaked bedding. Regular to some irregular, thick to medium shaly parting; irregular fracture. Rare fine gray streaks and very small buff pyritic blebs in lower part. 1749.8 1759.0 0il shale and marlstone: medium to light brownish gray and			rare dark brown (10YR 2/2-1/2, rare 3/2-3/3). Very
regular to sirregular, thick to medium parting; irregular to some coarse hackly fracture. An irregular diagonal glossy shear surface with slickensides near middle. 1740.0 1741.4 0il shale: dark brownish gray (10YR 2/2-3/2). Very faint smooth streaked bedding. Regular to slightly irregular, thick to rare thin shaly parting; irregular to very hackly fracture. Very rare fine vitreous black organic streaks. A diagonal shear surface with slickensides at base. 1741.4 1744.4 0il shale: dark and some medium brownish gray (10YR 3/2-2/2, some 4/2). Very faint smooth to distorted and displaced streaked bedding and some laminations. Regular to some irregular, thick to thin shaly parting; coarse to fine irregular hackly fracture. Some to common small brown pyritic spots and fine streaks. Rare 1-inch faintly laminated dolomite bands with short bitumen-stained fractures. 1744.0 1746.4 0il shale: medium to dark brownish gray (10YR 4/2-3/2, some 2/2). Faint smooth to distorted laminations and streaked bedding. Regular to rare irregular, thick to medium shaly parting; irregular hackly fracture. Some thin to medium brownish gray dolomite bands with short vertical fractures in upper part. Some fine brown streaks with rare pyrite in lower part. Thin faintly streaked gray stringers at 1745.8 and 1746.3 feet. 1746.4 1748.5 0il shale: medium to dark brownish gray (2.5Y 4/2-3/2, some 4/1 lower part). Faint to very faint slightly distorted laminations and some streaked bedding. Slightly irregular to some very irregular, thick to rare thin shaly parting; irregular fracture. 1749.8 1749.8 1759.0 0il shale: medium and rare dark brownish gray (2.5Y 4/2-3/2, rare 3/2). Faint fairly smooth to irregular, distorted and displaced laminations and some very faint streaked bedding. Regular to some irregular, thick to madium shaly parting; irregular fracture. Rare fine gray streaks and very small buff pyritic blebs in lower part. 1749.8 1759.0 0il shale and marlstone: medium to light brownish gray and some buff (2.5Y 4/2 and 4/1-6/2 and 6/1, s	•		faint fairly smooth streaked bedding. Slightly ir-
diagonal glossy shear surface with slickensides near middle. 1740.0 1741.4 Oil shale: dark brownish gray (10YR 2/2-3/2). Very faint smooth streaked bedding. Regular to slightly irregular, thick to rare thin shaly parting; irregular to very hackly fracture. Very rare fine vitreous black organic streaks. A diagonal shear surface with slickensides at base. 1741.4 1744.4 Oil shale: dark and some medium brownish gray (10YR 3/2-2/2, some 4/2). Very faint smooth to distorted and displaced streaked bedding and some laminations. Regular to some irregular, thick to thin shaly parting; coarse to fine irregular hackly fracture. Some to common small brown pyritic spots and fine streaks. Rare 1-inch faintly laminated dolomite bands with short bitumen-stained fractures. Oil shale: medium to dark brownish gray (10YR 4/2-3/2, some 2/2). Faint smooth to distorted laminations and streaked bedding. Regular to rare irregular, thick to medium shaly parting; irregular hackly fracture. Some thin to medium brownish gray dolomite bands with short vertical fractures in upper part. Some fine brown streaks with rare pyrite in lower part. Thin faintly streaked gray stringers at 1745.8 and 1746.3 feet. 1746.4 1748.5 Oil shale: medium to dark brownish gray (2.5Y 4/2-3/2, some 4/1 lower part). Faint to very faint slightly distorted laminations and some streaked bedding. Slightly irregular to some very irregular, thick to rare thin shaly parting; irregular fracture. 1749.8 1749.8 1749.8 Oil shale: medium and rere dark brownish gray (2.5Y 5/2-4/2, rare 3/2). Faint fairly smooth to irregular, distorted and displaced laminations and some very faint streaked bedding. Regular to some irregular, thick to medium shaly parting; irregular fracture. Rare fine gray streaks and very small buff pyritic blebs in lower part. Oil shale and marlstone: medium to light brownish gray and some buff (2.5Y 4/2 and 4/1-6/2 and 6/1, some 7/2-7/1). Faint to distinct irregular, distorted and commonly displaced to some smooth laminations; contorted			regular to irregular, thick to medium parting: ir-
1740.0 1741.4 Oil shale: dark brownish gray (10YR 2/2-3/2). Very faint smooth streaked bedding. Regular to slightly irregular, thick to rare thin shaly parting; irregular to very hackly fracture. Very rare fine vitreous black organic streaks. A diagonal shear surface with slickensides at base. 1741.4 1744.4 Oil shale: dark and some medium brownish gray (10YR 3/2-2/2, some 4/2). Very faint smooth to distorted and displaced streaked bedding and some laminations. Regular to some irregular, thick to thin shaly parting; coarse to fine irregular hackly fracture. Some to common small brown pyritic spots and fine streaks. Rare 1-inch faintly laminated dolomite bands with short bitumen-stained fractures. 1744.0 1746.4 Oil shale: medium to dark brownish gray (10YR 4/2-3/2, some 2/2). Faint smooth to distorted laminations and streaked bedding. Regular to rare irregular, thick to medium shaly parting; irregular hackly fracture. Some thin to medium brownish gray dolomite bands with short vertical fractures in upper part. Some fine brown streaks with rare pyrite in lower part. Thin faintly streaked gray stringers at 1745.8 and 1746.3 feet. 1746.4 1748.5 Oil shele: medium to dark brownish gray (2.5Y 4/2-3/2, some 4/1 lower part). Faint to very faint slightly distorted laminations and some streaked bedding. Slightly irregular to some very irregular, thick to rare thin shaly parting; irregular fracture. 1748.5 1749.8 1749.8 Oil shele: medium and rare dark brownish gray (2.5Y 5/2-4/2, rare 3/2). Faint fairly smooth to irregular, distorted and displaced laminations and some very faint streaked bedding. Regular to some irregular, thick to medium shaly parting; irregular fracture. Rare fine gray streaks and very small buff pyritic blebs in lower part. 1749.8 1759.0 Oil shale and marlstone: medium to light brownish gray and some buff (2.5Y 4/2 and 4/1-6/2 and 6/1, some 7/2-7/1). Faint to distinct irregular, distorted and commonly displaced to some smooth laminations; contorted			regular to some coarse hackly fracture. An irregular
1740.0 1741.4 0il shale: dark brownish gray (10YR 2/2-3/2). Very faint smooth streaked bedding. Regular to slightly irregular, thick to rare thin shaly parting; irregular to very hackly fracture. Very rare fine vitreous black organic streaks. A diagonal shear surface with slickensides at base. 1741.4 1744.4 0il shale: dark and some medium brownish gray (10YR 3/2-2/2, some 4/2). Very faint smooth to distorted and displaced streaked bedding and some laminations. Regular to some irregular, thick to thin shaly parting; coarse to fine irregular hackly fracture. Some to common small brown pyritic spots and fine streaks. Rare 1-inch faintly laminated dolomite bands with short bitumen-stained fractures. 1744.0 1746.4 0il shale: medium to dark brownish gray (10YR 4/2-3/2, some 2/2). Faint smooth to distorted laminations and streaked bedding. Regular to rare irregular, thick to medium shaly parting; irregular hackly fracture. Some thin to medium brownish gray dolomite bands with short vertical fractures in upper part. Some fine brown streaked with rare pyrite in lower part. Thin faintly streaked gray stringers at 1745.8 and 1746.3 feet. 1746.4 1748.5 0il shale: medium to dark brownish gray (2.5Y 4/2-3/2, some 4/1 lower part). Faint to very faint slightly distorted laminations and some streaked bedding. Slightly irregular to some very irregular, thick to rare thin shaly parting; irregular fracture. 1748.5 1749.8 0il shale: medium and rare dark brownish gray (2.5Y 5/2-4/2, rare 3/2). Faint fairly smooth to irregular, distorted and displaced laminations and some very faint streaked bedding. Regular to some irregular, thick to medium shaly parting; irregular fracture. Rare fine gray streaks and very small buff pyritic blebs in lower part. 1749.8 1759.0 0il shale and marlstone: medium to light brownish gray and some buff (2.5Y 4/2 and 4/1-6/2 and 6/1, some 7/2-7/1). Faint to distinct irregular, distorted and commonly displaced to some smooth laminations; contorted			diagonal glossy shear surface with slickensides near middle.
fraint smooth streaked bedding. Regular to slightly irregular, thick to rare thin shaly parting; irregular to very hackly fracture. Very rare fine vitreous black organic streaks. A diagonal shear surface with slickensides at base. 1741.4 1744.4 Oil shale: dark and some medium brownish gray (10YR 3/2-2/2, some 4/2). Very faint smooth to distorted and displaced streaked bedding and some laminations. Regular to some irregular, thick to thin shaly parting; coarse to fine irregular hackly fracture. Some to common small brown pyritic spots and fine streaks. Rare 1-inch faintly laminated dolomite bands with short bitumen-stained fractures. 1744.0 1746.4 Oil shale: medium to dark brownish gray (10YR 4/2-3/2, some 2/2). Faint smooth to distorted laminations and streaked bedding. Regular to rare irregular, thick to medium shaly parting; irregular hackly fracture. Some thin to medium brownish gray dolomite bands with short vertical fractures in upper part. Some fine brown streaked bedding. Regular to rare irregular, thick to rare thin shaly parting; irregular part. Some fine brown streaked gray stringers at 1745.8 and 1746.3 feet. 1746.4 1748.5 Oil shale: medium to dark brownish gray (2.5Y 4/2-3/2, some 4/1 lower part). Faint to very faint slightly distorted laminations and some streaked bedding. Slightly irregular to some very irregular, thick to rare thin shaly parting; irregular fracture. 1749.8 1749.8 Oil shale: medium and rare dark brownish gray (2.5Y 5/2-4/2, rare 3/2). Faint fairly smooth to irregular, distorted and displaced laminations and some very faint streaked bedding. Regular to some irregular, thick to medium shaly parting; irregular fracture. Rare fine gray streaks and very small buff pyritic blebs in lower part. 1749.8 1759.0 Oil shale and marlstone: medium to light brownish gray and some buff (2.5Y 4/2 and 4/1-6/2 and 6/1, some 7/2-7/1). Faint to distinct irregular, distorted and commonly displaced to some smooth laminations; contorted	1740.0	1741.4	
irregular, thick to rare thin shaly parting; irregular to very hackly fracture. Very rare fine vitreous black organic streaks. A diagonal shear surface with slickensides at base. 1741.4 1744.4 011 1744.4 011 shale; dark and some medium brownish gray (10YR 3/2-2/2, some 4/2). Very faint smooth to distorted and displaced streaked bedding and some laminations. Regular to some irregular, thick to thin shaly parting; coarse to fine irregular hackly fracture. Some to common small brown pyritic spots and fine streaks. Rare 1-inch faintly laminated dolomite bands with short bitumen-stained fractures. 1744.0 1746.4 01 shale: medium to dark brownish gray (10YR 4/2-3/2, some 2/2). Faint smooth to distorted laminations and streaked bedding. Regular to rare irregular, thick to medium shaly parting; irregular hackly fracture. Some thin to medium brownish gray dolomite bands with short vertical fractures in upper part. Some fine brown streaks with rare pyrite in lover part. Thin faintly streaked gray stringers at 1745.8 and 1746.3 feet. 1746.4 1748.5 01 shale: medium to dark brownish gray (2.5Y 4/2-3/2, some 4/1 lover part). Faint to very faint slightly distorted laminations and some streaked bedding. Slightly irregular to some very irregular, thick to rare thin shaly parting; irregular fracture. 1748.5 1749.8 01 shale: medium and rare dark brownish gray (2.5Y 5/2-4/2, rare 3/2). Faint fairly smooth to irregular, distorted and displaced laminations and some very faint streaked bedding. Regular to some irregular, thick to medium shaly parting; irregular fracture. Rare fine gray streaks and very small buff pyritic blebs in lower part. 1749.8 1759.0 01 shale and marlstone: medium to light brownish gray and some buff (2.5Y 4/2 and 4/1-6/2 and 6/1, some 7/2-7/1). Faint to distinct irregular, distorted and commonly displaced to some smooth laminations; contorted			faint smooth streaked bedding. Regular to slightly
to very hackly fracture. Very rare fine vitreous black organic streaks. A diagonal shear surface with slickensides at base. 1741.4 1744.4 01 shale: dark and some medium brownish gray (10YR 3/2-2/2, some 4/2). Very faint smooth to distorted and displaced streaked bedding and some laminations. Regular to some irregular, thick to thin shaly parting; coarse to fine irregular hackly fracture. Some to common small brown pyritic spots and fine streaks. Rare l-inch faintly laminated dolomite bands with short bitumen-stained fractures. 1744.0 1746.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 01146.4 0			irregular, thick to rare thin shalv parting irregular
1741.4 1744.4 Oil shale: dark and some medium brownish gray (10YR 3/2-2/2, some 4/2). Very faint smooth to distorted and displaced streaked bedding and some laminations. Regular to some irregular, thick to thin shaly parting; coarse to fine irregular hackly fracture. Some to common small brown pyritic spots and fine streaks. Rare 1-inch faintly laminated dolomite bands with short bitumen-stained fractures. 1744.0 1746.4 Oil shale: medium to dark brownish gray (10YR 4/2-3/2, some 2/2). Faint smooth to distorted laminations and streaked bedding. Regular to rare irregular, thick to medium shaly parting; irregular hackly fracture. Some thin to medium brownish gray dolomite bands with short vertical fractures in upper part. Some fine brown streaks with rare pyrite in lower part. Thin faintly streaked gray stringers at 1745.8 and 1746.3 feet. 1746.4 1748.5 Oil shale: medium to dark brownish gray (2.5Y 4/2-3/2, some 4/1 lower part). Faint to very faint slightly distorted laminations and some streaked bedding. Slightly irregular to some very irregular, thick to rare thin shaly parting; irregular fracture. Oil shale: medium and rare dark brownish gray (2.5Y 5/2-4/2, rare 3/2). Faint fairly smooth to irregular, distorted and displaced laminations and some very faint streaked bedding. Regular to some irregular, thick to medium shaly parting; irregular fracture. Rare fine gray streaks and very small buff pyritic blebs in lower part. 1749.8 1759.0 Oil shale and marlstone: medium to light brownish gray and some buff (2.5Y 4/2 and 4/1-6/2 and 6/1, some 7/2-7/1). Faint to distinct irregular, distorted and commonly displaced to some smooth laminations; contorted			to very hackly fracture. Very rare fine vitreous black
1741.4 1744.4 0il shale: dark and some medium brownish gray (10YR 3/2-2/2, some 4/2). Very faint smooth to distorted and displaced streaked bedding and some laminations. Regular to some irregular, thick to thin shaly parting; coarse to fine irregular hackly fracture. Some to common small brown pyritic spots and fine streaks. Rare 1-inch faintly laminated dolomite bands with short bitumen-stained fractures. 1744.0 1746.4 0il shale: medium to dark brownish gray (10YR 4/2-3/2, some 2/2). Faint smooth to distorted laminations and streaked bedding. Regular to rare irregular, thick to medium shaly parting; irregular hackly fracture. Some thin to medium brownish gray dolomite bands with short vertical fractures in upper part. Some fine brown streaks with rare pyrite in lower part. Thin faintly streaked gray stringers at 1745.8 and 1746.3 feet. 1746.4 1748.5 0il shale: medium to dark brownish gray (2.5Y. 4/2-3/2, some 4/1 lower part). Faint to very faint slightly distorted laminations and some streaked bedding. Slightly irregular to some very irregular, thick to rare thin shaly parting; irregular fracture. 1748.5 1749.8 1749.8 0il shale: medium and rare dark brownish gray (2.5Y. 5/2-4/2, rare 3/2). Faint fairly smooth to irregular, distorted and displaced laminations and some very faint streaked bedding. Regular to some irregular, thick to medium shaly parting; irregular fracture. Rare fine gray streaks and very small buff pyritic blebs in lower part. 1749.8 1759.0 0il shale and marlstone: medium to light brownish gray and some buff (2.5Y 4/2 and 4/1-6/2 and 6/1, some 7/2-7/1). Faint to distinct irregular, distorted and commonly displaced to some smooth laminations; contorted	•		organic streaks. A diagonal shear surface with
1744.4 Oil shale: dark and some medium brownish gray (10YR 3/2-2/2, some 4/2). Very faint smooth to distorted and displaced streaked bedding and some laminations. Regular to some irregular, thick to thin shaly parting; coarse to fine irregular hackly fracture. Some to common small brown pyritic spots and fine streaks. Rare 1-inch faintly laminated dolomite bands with short bitumen-stained fractures. 1744.0 1746.4 Oil shale: medium to dark brownish gray (10YR 4/2-3/2, some 2/2). Faint smooth to distorted laminations and streaked bedding. Regular to rare irregular, thick to medium shaly parting; irregular hackly fracture. Some thin to medium brownish gray dolomite bands with short vertical fractures in upper part. Some fine brown streaks with rare pyrite in lower part. Thin faintly streaked gray stringers at 1745.8 and 1746.3 feet. Oil shale: medium to dark brownish gray (2.5Y 4/2-3/2, some 4/1 lower part). Faint to very faint slightly distorted laminations and some streaked bedding. Slightly irregular to some very frregular, thick to rare thin shaly parting; irregular fracture. Oil shale: medium and rare dark brownish gray (2.5Y 5/2-4/2, rare 3/2). Faint fairly smooth to irregular, distorted and displaced laminations and some very faint streaked bedding. Regular to some irregular, thick to medium shaly parting; irregular fracture. Rare fine gray streaks and very small buff pyritic blebs in lower part. Oil shale and marlstone: medium to light brownish gray and some buff (2.5Y 4/2 and 4/1-6/2 and 6/1, some 7/2-7/1). Faint to distinct irregular, distorted and commonly displaced to some smooth laminations; contorted	•		slickensides at base.
3/2-2/2, some 4/2). Very faint smooth to distorted and displaced streaked bedding and some laminations. Regular to some irregular, thick to thin shaly parting; coarse to fine irregular hackly fracture. Some to common small brown pyritic spots and fine streaks. Rare 1-inch faintly laminated dolomite bands with short bitumen-stained fractures. 1744.0 1746.4 0il shale: medium to dark brownish gray (10YR 4/2-3/2, some 2/2). Faint smooth to distorted laminations and streaked bedding. Regular to rare irregular, thick to medium shaly parting; irregular hackly fracture. Some thin to medium brownish gray dolomite bands with short vertical fractures in upper part. Some fine brown streaks with rare pyrite in lower part. Thin faintly streaked gray stringers at 1745.8 and 1746.3 feet. 1746.4 1748.5 0il shale: medium to dark brownish gray (2.5Y 4/2-3/2, some 4/1 lower part). Faint to very faint slightly distorted laminations and some streaked bedding. Slightly irregular to some very irregular, thick to rare thin shaly parting; irregular fracture. 1749.8 1749.8 1749.8 1749.8 2irregular to some irregular, thick to medium shaly parting; irregular fracture. Rare fine gray streaks and very small buff pyritic blebs in lower part. 1749.8 1759.0 0il shale and marlstone: medium to light brownish gray and some buff (2.5Y 4/2 and 4/1-6/2 and 6/1, some 7/2-7/1). Faint to distinct irregular, distorted and commonly displaced to some smooth laminations; contorted	1741.4	1744.4	
Regular to some irregular, thick to thin shaly parting; coarse to fine irregular hackly fracture. Some to common small brown pyritic spots and fine streaks. Rare 1-inch faintly laminated dolomite bands with short bitumen-stained fractures. 1744.0 1746.4 0i1 shale: medium to dark brownish gray (10YR 4/2-3/2, some 2/2). Faint smooth to distorted laminations and streaked bedding. Regular to rare irregular, thick to medium shaly parting; irregular hackly fracture. Some thin to medium brownish gray dolomite bands with short vertical fractures in upper part. Some fine brown streaks with rare pyrite in lower part. Thin faintly streaked gray stringers at 1745.8 and 1746.3 feet. 1746.4 1748.5 0il shale: medium to dark brownish gray (2.5Y 4/2-3/2, some 4/1 lower part). Faint to very faint slightly distorted laminations and some streaked bedding. Slightly irregular to some very irregular, thick to rare thin shaly parting; irregular fracture. 1748.5 1749.8 0il shale: medium and rare dark brownish gray (2.5Y 5/2-4/2, rare 3/2). Faint fairly smooth to irregular, distorted and displaced laminations and some very faint streaked bedding. Regular to some irregular, thick to medium shaly parting; irregular fracture. Rare fine gray streaks and very small buff pyritic blebs in lower part. 0il shale and marlstone: medium to light brownish gray and some buff (2.5Y 4/2 and 4/1-6/2 and 6/1, some 7/2-7/1). Faint to distinct irregular, distorted and commonly displaced to some smooth laminations; contorted		(x,y) = (x,y)	3/2-2/2, some 4/2). Very faint smooth to distorted
Regular to some irregular, thick to thin shaly parting; coarse to fine irregular hackly fracture. Some to common small brown pyritic spots and fine streaks. Rare 1-inch faintly laminated dolomite bands with short bitumen-stained fractures. 1744.0 1746.4 01746.4 01746.4 01746.4 01746.4 01746.4 01746.4 01746.4 01746.4 01746.4 01746.4 01746.4 01746.4 01746.4 01746.4 01746.4 01746.4 01746.4 01746.4 01746.4 01746.4 01746.4 01746.4 01746.5 01746.4 01746.5 01746.4 01746.5 01746.4 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5 01746.5			and displaced streaked bedding and some laminations
ing; coarse to fine irregular hackly fracture. Some to common small brown pyritic spots and fine streaks. Rare 1-inch faintly laminated dolomite bands with short bitumen-stained fractures. 1744.0 1746.4 0il shale: medium to dark brownish gray (10YR 4/2-3/2, some 2/2). Faint smooth to distorted laminations and streaked bedding. Regular to rare irregular, thick to medium shaly parting; irregular hackly fracture. Some thin to medium brownish gray dolomite bands with short vertical fractures in upper part. Some fine brown streaks with rare pyrite in lower part. Thin faintly streaked gray stringers at 1745.8 and 1746.3 feet. 1746.4 1748.5 0il shale: medium to dark brownish gray (2.5Y 4/2-3/2, some 4/1 lower part). Faint to very faint slightly distorted laminations and some streaked bedding. Slightly irregular to some very irregular, thick to rare thin shaly parting; irregular fracture. 0il shale: medium and rare dark brownish gray (2.5Y 5/2-4/2, rare 3/2). Faint fairly smooth to irregular, distorted and displaced laminations and some very faint streaked bedding. Regular to some irregular, thick to medium shaly parting; irregular fracture. Rare fine gray streaks and very small buff pyritic blebs in lower part. 0il shale and marlstone: medium to light brownish gray and some buff (2.5Y 4/2 and 4/1-6/2 and 6/1, some 7/2-7/1). Faint to distinct irregular, distorted and commonly displaced to some smooth laminations; contorted			Regular to some irregular, thick to thin shalv part-
to common small brown pyritic spots and fine streaks. Rare 1-inch faintly laminated dolomite bands with short bitumen-stained fractures. Oil shale: medium to dark brownish gray (10YR 4/2-3/2, some 2/2). Faint smooth to distorted laminations and streaked bedding. Regular to rare irregular, thick to medium shaly parting; irregular hackly fracture. Some thin to medium brownish gray dolomite bands with short vertical fractures in upper part. Some fine brown streaks with rare pyrite in lower part. Thin faintly streaked gray stringers at 1745.8 and 1746.3 feet. Oil shale: medium to dark brownish gray (2.5Y 4/2-3/2, some 4/1 lower part). Faint to very faint slightly distorted laminations and some streaked bedding. Slightly irregular to some very irregular, thick to rare thin shaly parting; irregular fracture. Oil shale: medium and rare dark brownish gray (2.5Y 5/2-4/2, rare 3/2). Faint fairly smooth to irregular, distorted and displaced laminations and some very faint streaked bedding. Regular to some irregular, thick to medium shaly parting; irregular fracture. Rare fine gray streaks and very small buff pyritic blebs in lower part. Oil shale and marlstone: medium to light brownish gray and some buff (2.5Y 4/2 and 4/1-6/2 and 6/1, some 7/2- 7/1). Faint to distinct irregular, distorted and commonly displaced to some smooth laminations; contorted			ing; coarse to fine irregular hackly fracture. Some
Rare 1-inch faintly laminated dolomite bands with short bitumen-stained fractures. 1744.0 1746.4 0il shale: medium to dark brownish gray (10YR 4/2-3/2, some 2/2). Faint smooth to distorted laminations and streaked bedding. Regular to rare irregular, thick to medium shaly parting; irregular hackly fracture. Some thin to medium brownish gray dolomite bands with short vertical fractures in upper part. Some fine brown streaks with rare pyrite in lower part. Thin faintly streaked gray stringers at 1745.8 and 1746.3 feet. 1746.4 1748.5 0il shale: medium to dark brownish gray (2.5Y 4/2-3/2, some 4/1 lower part). Faint to very faint slightly distorted laminations and some streaked bedding. Slightly irregular to some very irregular, thick to rare thin shaly parting; irregular fracture. 1748.5 1749.8 0il shale: medium and rare dark brownish gray (2.5Y 5/2-4/2, rare 3/2). Faint fairly smooth to irregular, distorted and displaced laminations and some very faint streaked bedding. Regular to some irregular, thick to medium shaly parting; irregular fracture. Rare fine gray streaks and very small buff pyritic blebs in lower part. 1749.8 1759.0 0il shale and marlstone: medium to light brownish gray and some buff (2.5Y 4/2 and 4/1-6/2 and 6/1, some 7/2-7/1). Faint to distinct irregular, distorted and commonly displaced to some smooth laminations; contorted	•		to common small brown pyritic spots and fine streaks.
short bitumen-stained fractures. 0il shale: medium to dark brownish gray (10YR 4/2-3/2, some 2/2). Faint smooth to distorted laminations and streaked bedding. Regular to rare irregular, thick to medium shaly parting; irregular hackly fracture. Some thin to medium brownish gray dolomite bands with short vertical fractures in upper part. Some fine brown streaks with rare pyrite in lower part. Thin faintly streaked gray stringers at 1745.8 and 1746.3 feet. 1746.4 1748.5 Oil shale: medium to dark brownish gray (2.5Y 4/2-3/2, some 4/1 lower part). Faint to very faint slightly distorted laminations and some streaked bedding. Slightly irregular to some very irregular, thick to rare thin shaly parting; irregular fracture. Oil shale: medium and rare dark brownish gray (2.5Y 5/2-4/2, rare 3/2). Faint fairly smooth to irregular, distorted and displaced laminations and some very faint streaked bedding. Regular to some irregular, thick to medium shaly parting; irregular fracture. Rare fine gray streaks and very small buff pyritic blebs in lower part. Oil shale and marlstone: medium to light brownish gray and some buff (2.5Y 4/2 and 4/1-6/2 and 6/1, some 7/2-7/1). Faint to distinct irregular, distorted and commonly displaced to some smooth laminations; contorted			Rare 1-inch faintly laminated dolomite bands with
some 2/2). Faint smooth to distorted laminations and streaked bedding. Regular to rare irregular, thick to medium shaly parting; irregular hackly fracture. Some thin to medium brownish gray dolomite bands with short vertical fractures in upper part. Some fine brown streaks with rare pyrite in lower part. Thin faintly streaked gray stringers at 1745.8 and 1746.3 feet. 1746.4 1748.5 0il shale: medium to dark brownish gray (2.5Y 4/2-3/2, some 4/1 lower part). Faint to very faint slightly distorted laminations and some streaked bedding. Slightly irregular to some very irregular, thick to rare thin shaly parting; irregular fracture. 0il shale: medium and rare dark brownish gray (2.5Y 5/2-4/2, rare 3/2). Faint fairly smooth to irregular, distorted and displaced laminations and some very faint streaked bedding. Regular to some irregular, thick to medium shaly parting; irregular fracture. Rare fine gray streaks and very small buff pyritic blebs in lower part. 1749.8 1759.0 0il shale and marlstone: medium to light brownish gray and some buff (2.5Y 4/2 and 4/1-6/2 and 6/1, some 7/2-7/1). Faint to distinct irregular, distorted and commonly displaced to some smooth laminations; contorted			short bitumen-stained fractures.
some 2/2). Faint smooth to distorted laminations and streaked bedding. Regular to rare irregular, thick to medium shaly parting; irregular hackly fracture. Some thin to medium brownish gray dolomite bands with short vertical fractures in upper part. Some fine brown streaks with rare pyrite in lower part. Thin faintly streaked gray stringers at 1745.8 and 1746.3 feet. 1746.4 1748.5 Oil shale: medium to dark brownish gray (2.5Y 4/2-3/2, some 4/1 lower part). Faint to very faint slightly distorted laminations and some streaked bedding. Slightly irregular to some very irregular, thick to rare thin shaly parting; irregular fracture. Oil shale: medium and rare dark brownish gray (2.5Y 5/2-4/2, rare 3/2). Faint fairly smooth to irregular, distorted and displaced laminations and some very faint streaked bedding. Regular to some irregular, thick to medium shaly parting; irregular fracture. Rare fine gray streaks and very small buff pyritic blebs in lower part. 1749.8 1759.0 Oil shale and marlstone: medium to light brownish gray and some buff (2.5Y 4/2 and 4/1-6/2 and 6/1, some 7/2-7/1). Faint to distinct irregular, distorted and commonly displaced to some smooth laminations; contorted	1744.0	1746.4	0il shale: medium to dark brownish gray (10YR 4/2-3/2.
streaked bedding. Regular to rare irregular, thick to medium shaly parting; irregular hackly fracture. Some thin to medium brownish gray dolomite bands with short vertical fractures in upper part. Some fine brown streaks with rare pyrite in lower part. Thin faintly streaked gray stringers at 1745.8 and 1746.3 feet. 1746.4 1748.5 Oil shale: medium to dark brownish gray (2.5Y 4/2-3/2, some 4/1 lower part). Faint to very faint slightly distorted laminations and some streaked bedding. Slightly irregular to some very irregular, thick to rare thin shaly parting; irregular fracture. 1748.5 1749.8 Oil shale: medium and rare dark brownish gray (2.5Y 5/2-4/2, rare 3/2). Faint fairly smooth to irregular, distorted and displaced laminations and some very faint streaked bedding. Regular to some irregular, thick to medium shaly parting; irregular fracture. Rare fine gray streaks and very small buff pyritic blebs in lower part. 1749.8 1759.0 Oil shale and marlstone: medium to light brownish gray and some buff (2.5Y 4/2 and 4/1-6/2 and 6/1, some 7/2-7/1). Faint to distinct irregular, distorted and commonly displaced to some smooth laminations; contorted			some 2/2). Faint smooth to distorted laminations and
medium shaly parting; irregular hackly fracture. Some thin to medium brownish gray dolomite bands with short vertical fractures in upper part. Some fine brown streaks with rare pyrite in lower part. Thin faintly streaked gray stringers at 1745.8 and 1746.3 feet. 1746.4 1748.5 Oil shale: medium to dark brownish gray (2.5Y 4/2-3/2, some 4/1 lower part). Faint to very faint slightly distorted laminations and some streaked bedding. Slightly irregular to some very irregular, thick to rare thin shaly parting; irregular fracture. Oil shale: medium and rare dark brownish gray (2.5Y 5/2-4/2, rare 3/2). Faint fairly smooth to irregular, distorted and displaced laminations and some very faint streaked bedding. Regular to some irregular, thick to medium shaly parting; irregular fracture. Rare fine gray streaks and very small buff pyritic blebs in lower part. Oil shale and marlstone: medium to light brownish gray and some buff (2.5Y 4/2 and 4/1-6/2 and 6/1, some 7/2-7/1). Faint to distinct irregular, distorted and commonly displaced to some smooth laminations; contorted			streaked bedding. Regular to rare irregular, thick to
vertical fractures in upper part. Some fine brown streaks with rare pyrite in lower part. Thin faintly streaked gray stringers at 1745.8 and 1746.3 feet. 1746.4 1748.5 Oil shale: medium to dark brownish gray (2.5Y 4/2-3/2, some 4/1 lower part). Faint to very faint slightly distorted laminations and some streaked bedding. Slightly irregular to some very irregular, thick to rare thin shaly parting; irregular fracture. Oil shale: medium and rare dark brownish gray (2.5Y 5/2-4/2, rare 3/2). Faint fairly smooth to irregular, distorted and displaced laminations and some very faint streaked bedding. Regular to some irregular, thick to medium shaly parting; irregular fracture. Rare fine gray streaks and very small buff pyritic blebs in lower part. 1749.8 1759.0 Oil shale and marlstone: medium to light brownish gray and some buff (2.5Y 4/2 and 4/1-6/2 and 6/1, some 7/2-7/1). Faint to distinct irregular, distorted and commonly displaced to some smooth laminations; contorted	•		medium shaly parting; irregular hackly fracture. Some
vertical fractures in upper part. Some fine brown streaks with rare pyrite in lower part. Thin faintly streaked gray stringers at 1745.8 and 1746.3 feet. 1746.4 1748.5 Oil shale: medium to dark brownish gray (2.5Y 4/2-3/2, some 4/1 lower part). Faint to very faint slightly distorted laminations and some streaked bedding. Slightly irregular to some very irregular, thick to rare thin shaly parting; irregular fracture. Oil shale: medium and rare dark brownish gray (2.5Y 5/2-4/2, rare 3/2). Faint fairly smooth to irregular, distorted and displaced laminations and some very faint streaked bedding. Regular to some irregular, thick to medium shaly parting; irregular fracture. Rare fine gray streaks and very small buff pyritic blebs in lower part. 1749.8 1759.0 Oil shale and marlstone: medium to light brownish gray and some buff (2.5Y 4/2 and 4/1-6/2 and 6/1, some 7/2-7/1). Faint to distinct irregular, distorted and commonly displaced to some smooth laminations; contorted			thin to medium brownish gray dolomite bands with short
streaked gray stringers at 1745.8 and 1746.3 feet. Oil shale: medium to dark brownish gray (2.5Y 4/2-3/2, some 4/1 lower part). Faint to very faint slightly distorted laminations and some streaked bedding. Slightly irregular to some very irregular, thick to rare thin shaly parting; irregular fracture. Oil shale: medium and rare dark brownish gray (2.5Y 5/2-4/2, rare 3/2). Faint fairly smooth to irregular, distorted and displaced laminations and some very faint streaked bedding. Regular to some irregular, thick to medium shaly parting; irregular fracture. Rare fine gray streaks and very small buff pyritic blebs in lower part. Oil shale and marlstone: medium to light brownish gray and some buff (2.5Y 4/2 and 4/1-6/2 and 6/1, some 7/2-7/1). Faint to distinct irregular, distorted and commonly displaced to some smooth laminations; contorted			vertical fractures in upper part. Some fine brown
streaked gray stringers at 1745.8 and 1746.3 feet. Oil shale: medium to dark brownish gray (2.5Y 4/2-3/2, some 4/1 lower part). Faint to very faint slightly distorted laminations and some streaked bedding. Slightly irregular to some very irregular, thick to rare thin shaly parting; irregular fracture. Oil shale: medium and rare dark brownish gray (2.5Y 5/2-4/2, rare 3/2). Faint fairly smooth to irregular, distorted and displaced laminations and some very faint streaked bedding. Regular to some irregular, thick to medium shaly parting; irregular fracture. Rare fine gray streaks and very small buff pyritic blebs in lower part. Oil shale and marlstone: medium to light brownish gray and some buff (2.5Y 4/2 and 4/1-6/2 and 6/1, some 7/2-7/1). Faint to distinct irregular, distorted and commonly displaced to some smooth laminations; contorted			streaks with rare pyrite in lower part. Thin faintly
some 4/1 lower part). Faint to very faint slightly distorted laminations and some streaked bedding. Slightly irregular to some very irregular, thick to rare thin shaly parting; irregular fracture. 1748.5 1749.8 Oil shale: medium and rare dark brownish gray (2.5Y 5/2-4/2, rare 3/2). Faint fairly smooth to irregular, distorted and displaced laminations and some very faint streaked bedding. Regular to some irregular, thick to medium shaly parting; irregular fracture. Rare fine gray streaks and very small buff pyritic blebs in lower part. 1749.8 1759.0 Oil shale and marlstone: medium to light brownish gray and some buff (2.5Y 4/2 and 4/1-6/2 and 6/1, some 7/2-7/1). Faint to distinct irregular, distorted and commonly displaced to some smooth laminations; contorted			streaked gray stringers at 1745.8 and 1746.3 feet.
distorted laminations and some streaked bedding. Slightly irregular to some very irregular, thick to rare thin shaly parting; irregular fracture. Oil shale: medium and rare dark brownish gray (2.5Y 5/2-4/2, rare 3/2). Faint fairly smooth to irregular, distorted and displaced laminations and some very faint streaked bedding. Regular to some irregular, thick to medium shaly parting; irregular fracture. Rare fine gray streaks and very small buff pyritic blebs in lower part. Oil shale and marlstone: medium to light brownish gray and some buff (2.5Y 4/2 and 4/1-6/2 and 6/1, some 7/2-7/1). Faint to distinct irregular, distorted and commonly displaced to some smooth laminations; contorted	1746.4	1748.5	Oil shale: medium to dark brownish gray (2.5Y 4/2-3/2,
Slightly irregular to some very irregular, thick to rare thin shaly parting; irregular fracture. 1748.5 1749.8 0il shale: medium and rare dark brownish gray (2.5Y 5/2-4/2, rare 3/2). Faint fairly smooth to irregular, distorted and displaced laminations and some very faint streaked bedding. Regular to some irregular, thick to medium shaly parting; irregular fracture. Rare fine gray streaks and very small buff pyritic blebs in lower part. 1749.8 1759.0 0il shale and marlstone: medium to light brownish gray and some buff (2.5Y 4/2 and 4/1-6/2 and 6/1, some 7/2-7/1). Faint to distinct irregular, distorted and commonly displaced to some smooth laminations; contorted			some 4/1 lower part). Faint to very faint slightly
1748.5 1749.8 0il shale: medium and rare dark brownish gray (2.5Y 5/2-4/2, rare 3/2). Faint fairly smooth to irregular, distorted and displaced laminations and some very faint streaked bedding. Regular to some irregular, thick to medium shaly parting; irregular fracture. Rare fine gray streaks and very small buff pyritic blebs in lower part. 1749.8 1759.0 0il shale and marlstone: medium to light brownish gray and some buff (2.5Y 4/2 and 4/1-6/2 and 6/1, some 7/2-7/1). Faint to distinct irregular, distorted and commonly displaced to some smooth laminations; contorted			distorted laminations and some streaked bedding.
1748.5 1749.8 Oil shale: medium and rare dark brownish gray (2.5Y 5/2-4/2, rare 3/2). Faint fairly smooth to irregular, distorted and displaced laminations and some very faint streaked bedding. Regular to some irregular, thick to medium shaly parting; irregular fracture. Rare fine gray streaks and very small buff pyritic blebs in lower part. 1749.8 1759.0 Oil shale and marlstone: medium to light brownish gray and some buff (2.5Y 4/2 and 4/1-6/2 and 6/1, some 7/2-7/1). Faint to distinct irregular, distorted and commonly displaced to some smooth laminations; contorted		•	Slightly irregular to some very irregular, thick to
5/2-4/2, rare 3/2). Faint fairly smooth to irregular, distorted and displaced laminations and some very faint streaked bedding. Regular to some irregular, thick to medium shaly parting; irregular fracture. Rare fine gray streaks and very small buff pyritic blebs in lower part. 1749.8 1759.0 Oil shale and marlstone: medium to light brownish gray and some buff (2.5Y 4/2 and 4/1-6/2 and 6/1, some 7/2-7/1). Faint to distinct irregular, distorted and commonly displaced to some smooth laminations; contorted	3710 5	17/0 0	rare thin shaly parting; irregular fracture.
distorted and displaced laminations and some very faint streaked bedding. Regular to some irregular, thick to medium shaly parting; irregular fracture. Rare fine gray streaks and very small buff pyritic blebs in lower part. 1749.8 1759.0 Oil shale and marlstone: medium to light brownish gray and some buff (2.5Y 4/2 and 4/1-6/2 and 6/1, some 7/2-7/1). Faint to distinct irregular, distorted and commonly displaced to some smooth laminations; contorted	1/48.5	1/49.8	Oll shale: medium and rare dark brownish gray (2.5Y
streaked bedding. Regular to some irregular, thick to medium shaly parting; irregular fracture. Rare fine gray streaks and very small buff pyritic blebs in lower part. 1749.8 1759.0 0il shale and marlstone: medium to light brownish gray and some buff (2.5Y 4/2 and 4/1-6/2 and 6/1, some 7/2-7/1). Faint to distinct irregular, distorted and commonly displaced to some smooth laminations; contorted			5/2-4/2, rare 3/2). Faint fairly smooth to irregular,
to medium shaly parting; irregular fracture. Rare fine gray streaks and very small buff pyritic blebs in lower part. 1749.8 1759.0 Oil shale and marlstone: medium to light brownish gray and some buff (2.5Y 4/2 and 4/1-6/2 and 6/1, some 7/2-7/1). Faint to distinct irregular, distorted and commonly displaced to some smooth laminations; contorted			distorted and displaced laminations and some very faint
gray streaks and very small buff pyritic blebs in lower part. 1749.8 1759.0 Oil shale and marlstone: medium to light brownish gray and some buff (2.5Y 4/2 and 4/1-6/2 and 6/1, some 7/2-7/1). Faint to distinct irregular, distorted and commonly displaced to some smooth laminations; contorted	*		streamed bedding. Kegular to some irregular, thick
part. 1749.8 1759.0 0il shale and marlstone: medium to light brownish gray and some buff (2.5Y 4/2 and 4/1-6/2 and 6/1, some 7/2-7/1). Faint to distinct irregular, distorted and commonly displaced to some smooth laminations; contorted			co medium snary parting; irregular fracture. Rare fine
1749.8 1759.0 Oil shale and marlstone: medium to light brownish gray and some buff (2.5Y 4/2 and 4/1-6/2 and 6/1, some 7/2-7/1). Faint to distinct irregular, distorted and commonly displaced to some smooth laminations; contorted			gray screaks and very small buff pyritic blebs in lower
and some buff (2.5Y 4/2 and 4/1-6/2 and 6/1, some 7/2-7/1). Faint to distinct irregular, distorted and commonly displaced to some smooth laminations; contorted	1749.8	1759 0	
7/1). Faint to distinct irregular, distorted and commonly displaced to some smooth laminations; contorted	4/1/10	2,00,0	and some buff (2.57 4/2 and 4/1 6/2 and 6/1 and 6/1
commonly displaced to some smooth laminations; contorted			7/1). Faint to distinct irregular distorted and
zones at 1752.1-1752.3 and 1757.5-1757.7 feet Regular			commonly displaced to some smooth laminations.
			zones at 1752.1-1752.3 and 1757 5-1757 7 feet Possiles
Together the second sec			TOTAL TIDES WITH TIDES TO TEET. RESULTED

Illustration No. SBR-3891P (Sheet 19 of 57)

Core samples from Equity Oil Company's Oldland Corehole 3--Continued

From	То	Description
1767.4	1770.0	Oil shale: dark to medium brownish gray (10YR 2/2-4/2 and 4/1). Very faint to faint smooth laminations.
		shaly parting (unctuous parting surfaces). irregular
		gray bands. A very irregular diagonal glossy shear
1770.0	1772.0	surface with slickensides at 1768.1 feet. Oil shale: dark to medium brownish gray (10YR and 2.5Y 3/2-5/2 and 5/1) and some medium gray (4-5N). Faint
		smooth to irregular, distorted and displaced laminations. Very regular to slightly irregular, thick to thin shaly parting (unctuous parting surfaces); irregular and rare hackly fracture. Rare massive brown dolomite bands
		with short bitumen-coated fractures. A thin smooth light gray to buff band with very common fine disseminated pyrite at 1770.8 feet. Some irregular glossy shear surfaces with slickensides at 1771.3 feet.
		sample of thin gray to buff pyritic band from 1770.8 feet:
1772.0	1774.0	X-ray - pyrite, dawsonite, sanidine. Oil shale and silicic marlstone: dark to medium brownish gray (10YR and 2.5Y 3/2-4/2, rare 5/2 and 5/1) and neutral gray (4-5N). Faint to fairly distinct irregular, distorted and displaced to fairly smooth laminations.
		(some unctuous parting surfaces); irregular to slightly conchoidal fracture. Some thin to medium massive term
		Sample of gray silicic maristone from 1773 6 foot.
		X-ray - quartz, dolomite; some illite, dawsonite, feldspar (K and Na), pyrite.
1774.0	1776.3	oil shale: dark to medium brownish gray (10YR 3/2-4/2, some 5/2-5/1, rare 2/2) and rare modium characters.
		Moderately distinct to faint, fairly smooth to irregular, distorted and displaced laminations. Regular to irregular, medium to thick parting; irregular fracture.
	• •	Some thin brownish gray dolomite bands with short bitumen- coated fractures in lower part.
1776.3	1777.6	Oil shale: dark and rare medium brownish gray (10YR 3/2-3/1, rare 4/2-4/1). Very faint smooth to slightly distorted and displaced laminations. Slightly irregular thick to medium shaly parting: slightly irregular
-		fracture. Some thin to medium massive brown dolomite bands with short bitumen-stained fractures. A brown to black woody plant fossil on parting surface near top.

Illustration No. SBR-3891P (Sheet 21 of 57)

Core samples from Equity Oil Company's Oldland Corehole 3--Continued

From	То	Description
		streaks; rare loop structures. Slightly irregular to
	en de la companya de La companya de la co	irregular, thick to medium parting (unctuous parting
		surfaces); slightly irregular to conchoidal fracture
1207		Rare fine gray pyritic laminae and streaks
1787.6	1790.6	Marlstone and some oil shale: buff and tan to medium
		and rare dark brownish gray and brown (2.59.7/2 and 6/3-
		3/2 and $3/3$, rare $4/3-3/2$). Very faint to some moder-
		ately distinct, fairly smooth to very distorted streaks
•		stringers, and rare laminations. Slightly irregular to
		very irregular thick parting (unctuous parting surfaces);
		slightly conchoidal to some irregular fracture. Rare
		fine lacy dull black pyritic stringers and very fine
		streaks. Sharp irregular interfingering contact with
		dark shale below.
		Sample of very faintly bedded light brownish gray
•	* * * * * * * * * * * * * * * * * * * *	marlstone from 1788.9 feet:
• .	•	Yeray - dolomito guanta 11:
		X-ray - dolomite, quartz; some illite, calcite, feldspar (Na and K).
1790.6	1792.5	Oil shale: dark brown and by
	-,,	0il shale: dark brown and brownish gray (2.5Y and 10YR
		3/3-3/2, some 2/2). Very faint distorted streaks and
		stringers. Regular to irregular, thick to medium
		parting; irregular and rare hackly fracture. Rare thin
		to fine dull gritty black streaks and blebssome with
1792.5	1795.2	limonite stains.
1172.5	1193.2	Oil shale and marlstone: medium to light brownish gray,
		some dark brownish gray in upper part (2.5Y 5/2-6/2, some
		4/2-3/2). Faint to very faint, distorted to fairly
•		smooth streaks and stringers. Irregular to some slightly
		irregular thick parting; irregular to slightly conchoidal
		rracture. Rare fine dull black pyritic stringers
1705 0		streaks, and flecks.
1795.2	1795.9	Oil shale: dark to medium brownish gray (2.5Y and 10YR
	•	3/4-3/4). Moderately distinct to faint distorted
		streaks and stringers. Irregular thick to medium part-
		ing; irregular fracture. Some thin to fine irregular
		dull black pyritic stringers.
		Sample of dull black stringer with very fine
		crystals from 1795.6 feet:
		X-ray - pyrite; trace quartz, dolomite.
1795.9	1798.0	Oil shale: dark brownish gray, some medium brown in
		upper part (10YR 2/2-3/2, some 4/3-5/3 upper part).
		Faint to very faint distorted streaks and stringers.
		Irregular thick parting; irregular fracture. Rare
		fine black stringers with very fine disseminated
		"ron very true arsseminated

Illustration No. SBR-3891P (Sheet 23 of 57)

Core samples from Equity Oil Company's Oldland Corehole 3--Continued

From	То	Description
		irregular fracture. Rare small to fine irregular brown
		crystalline masses and streaks. A thin dense massive brown dolomite band with short bitumen-stained fractures
1809.5	1812.0	at 1809.0. Oil shale: medium brownish gray and some brown to rare
		Oil shale: medium brownish gray and some brown to rare tan (2.5Y and 10YR 4/2-5/2, some 4/3-5/3, rare 6/3; some
		almost olive gray). Faint to some moderately distinct
		distorted laminations, stringers, and streaks: common
	•	irregular loop structures and displacements. Slightly
		irregular to very irregular, thick to medium parting:
		irregular fracture. Some fine buff earthy streaks and spots.
1812.0	1813.2	Oil shale: medium to dark brownish gray and some brown
		(2.5Y and 10YR 4/2-3/2, some 4/3-5/3, rare 3/1). Faint
		distorted laminations, stringers, and streaks; some
		irregular loop structures. Irregular thick to medium
		parting; irregular fracture. Some fine lacy black stringers at 1812.7 feet.
1813.2	1814.2	Oil shale: medium to dark brown and rare dark brownish
		gray (10YR 4/3-3/3, rare 3/2-2/2). Very faint dis-
		torted streaks, stringers, and laminations. Irregular
		to slightly irregular thick parting; irregular to
		slightly conchoidal fracture. Some fine lacy black
3037.0	303 = 0	stringers in upper part.
1814.2	1815.3	Oil shale: medium to rare dark brownish gray and brown
.:		(2.5Y and 10YR 5/2-4/2, rare 5/3-3/3 and 3/2). Faint
•	•	fairly smooth to distorted laminations, stringers, and
		streaks; very common small displacements and some
		irregular loop structures. Irregular thick to medium parting; slightly irregular to slightly conchoidal
		fracture. Some fine buff streaks and small blebs.
1815.3	1818.5	Oil shale: medium to dark brownish gray and some brown
	•	$(2.5)^{\circ}$ 5/2 and 5/1-3/2, some 5/3-4/3). Faint to
		moderately distinct, slightly distorted to very dis-
		torted and displaced laminations, stringers, and streaks
		irregular to some slightly irregular thick parting: ir-
		regular to slightly conchoidal fracture. Some to rare
		fine buff to tan, earthy to silty streaks and irregular
1818.5	1819.5	blebs. Oil shale: medium to dark brown and rare brownish grave
202047	XU19.5	The state of the s
		(10YR and 2.5Y 4/3-3/3, rare 5/2). Moderately distinct. irregular and distorted to contorted and displaced
		laminations; double fold (S-shaped) with axes through
1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -		1819.0 and 1819.2 feet. Irregular thick parting;
	- Sandaran and Sandaran Sanda	-Danie Parality

Illustration No. SBR-3891P (Sheet 25 of 57)

Core samples from Equity Oil Company's Oldland Corehole 3--Continued

From	То	Description
1835.2	1838.2	Oil shale: dark brownish gray and brown to some brownish
		Diack (101R 3/2 and 3/3-2/2, some $1/2$); some very slight
		sating luster. Faint to very faint very distorted
		streaks and stringers. Very irregular to rare slightly
		irregular thick parting; irregular fracture. Some to
		common very small buff to tan earthy blebs. Rare small brownish black cherty lenses.
		Sample of brownish block actions it is a
•		Sample of brownish black satiny oil shale from 1836.6 feet:
		X-ray - quartz, illite; some dolomite, Na-feldspar, pyrite.
1838.2	1840.2	Oil shale: dark brownish gray (10YR 2/2-3/2). Very
	e e e e e e e e e e e e e e e e e e e	faint very smooth laminations and streaked bedding.
		Slightly irregular to very regular, thick to rare thin
		shaly parting; irregular to slight hackly and some
		fairly smooth fracture. Common very fine buff streaks.
		Sample of shale with very fine buff streaks from
	•	1839.1 feet:
		X-ray - quartz, illite; some dolomite, feldspar
	•	(K and Na), pyrite.
1840.2	1844.2	Oil shale: dark brownish gray, some brownish black in
		lower part (10YR 3/2-2/2, some 1/2). Very faint very
		smooth to some slightly distorted laminations and
		streaked bedding. Very regular to some irregular, thick
		to thin shaly parting; irregular to backly fracture.
		Some fine buff streaks in upper part. Some very fine
		disseminated crystals in lower part. A thin massive
		dark brownish gray dolomite band with short bitumen-
		coated vertical fractures near base.
1844.2	1845.3	Oil shale: medium to dark brownish gray and brown,
•		rare buff and brownish black (10YR 4/2 and 4/3-3/3,
		rare $5/2-7/2$ and $2/2-1/2$). Faint to some moderately
	•	distinct, very irregular and distorted laminations.
		common very irregular loop structures and displacements.
		Regular to slightly irregular thick shaly parting;
		slightly irregular fracture.
1845.3	1846.3	Oil shale: dark and rare medium brownish gray and brown
		to some brownish black (10YR 3/2 and 3/3-2/2, some 1/2,
	e e e	rare 4/2-4/3); some satiny to rare resinous luster.
		Moderately distinct to faint, distorted to conterted
		laminations and stringers; some very irregular small to
		large loop structures. Slightly irregular to very ir-
		regular, thick to medium parting; slightly irregular to
	: .	some very irregular hackly fracture.

Illustration No. SBR-3891P (Sheet 27 of 57)

Core samples from Equity Oil Company's Oldland Corehole 3--Continued

From	То	Description
1859.9	1866.0	Oil shale: medium to dark brownish gray (2.5Y 4/1 and 4/2-3/2, rare 5/1 and 5/2; some almost olive gray). Very faint to faint, smooth to slightly irregular and distorted laminations. Very regular to some very irregular, medium to thin shaly parting (unctuous parting surfaces); irregular to some very hackly fracture. Some gray laminae and streaks. Some irregular glossy
1866.0	1867.0	shear surfaces with slickensides. Oil shale: medium to dark and rare light brownish gray (2.5Y 4/2-3/2, rare 5/2-6/2). Very faint to rare distinct, smooth to slightly irregular, distorted and displaced laminations. Regular to some irregular, medium and rare thin shaly parting (some unctuous); slightly irregular fracture. Some thin massive dolomite
1867.0	1868.0	bands with short bitumen-coated fractures. Oil shale: dark brownish gray (2.5Y 3/2-2/2). Very faint smooth to slightly distorted laminations and streaked bedding. Regular to some irregular, thick to medium
1868.0	1872.2	shaly parting; slightly irregular fracture. Oil shale: medium to dark brownish gray and some brown to rare tan (2.5Y 5/2-3/2, some 4/3-5/3, rare 6/3); rare resinous luster in upper part. Very faint to faint distorted laminations, stringers, and streaks; some very irregular loop structures. Irregular thick parting; slightly conchoidal to irregular fracture. A thin irregular waxy black organic stringer at 1869.8 feet. Some small irregular buff to brown patches in lower part.
1872.2	1876.0	Oil shale: dark brownish gray and brown, rare brownish black in upper part (10YR 3/2 and 3/3-2/2, rare 1/2). Very faint distorted to fairly smooth streaked bedding. Irregular to some slightly irregular thick parting; slightly irregular fracture. Some small brownish gray to buff, silty to fine granular lenses and blebs. Very
1876.0	1877.4	rare small irregular black cherty lenses. Oil shale: medium to dark brownish gray and brown, some tan in upper part (10YR 5/2-3/2 and 3/3, some 6/2-6/3, rare 2/2). Moderately distinct to faint, distorted and commonly displaced laminations. Very irregular to slightly irregular thick parting; irregular to slightly conchoidal fracture. Rare small dark brown to black, glassy to cherty lenses. Some small irregular tan to brown, earthy to silty blebs and streaks in lower part.

Illustration No. SER-3891P (Sheet 29 of 57)

Core samples from Equity Oil Company's Oldland Corehole 3--Continued

From	То	Description
1889.7	1891.2	Oil shale: medium to dark brownish gray (10YR 5/2-3/2,
		rare 2/2). Faint to fairly distinct irregular distorted
		laminations and some bands. Slightly irregular to very
		irregular, thick to medium parting; irregular to fairly
		smooth fracture. Some short vertical fractures in
		lighter colored bands. Rare small to fine tan earthy
Vantana		to black glassy lenses.
1891.2	1894.4	from 1892.8 to 1919.8 feet.
1091.2	1034.4	Oil shale and dolomite: dark brownish gray to brownish
		black oil shale and medium brownish gray dolomite
		(10YR 3/2-1/2 and 5/2-5/1). Very faint smooth to some
		distorted laminations in oil shale with common distinct lighter dolomite laminae and bands. Very irregular to
		rare regular, thick to thin parting; irregular to some
	•	hackly fracture. Very common short vertical fractures
		with fine buff radiating silky spots and bitumen coat-
		ings. Common thin to fine irregular brownish gray to
		plack dense stringers and streaks.
	•	Sample of scrapings from fractures with radiating
		silky spots from 1894.0 to 1894.4 feet:
		X-ray - dawsonite, dolomite; some quartz, Na- feldspar.
1894.4	1895.4	Oil shale: dark brownish gray and rare brownish black
		(101R 3/2) and $3/1-2/2$, rare $1/2$). Very faint smooth
		laminations. Regular to some irregular, thick to thin
	•	shaly parting; very hackly fracture. Common thin to
		fine dense brown to black pyritic stringers and streaks in upper part.
1895.4	1899.6	
		Oil shale: dark brownish gray (10YR and 2.5Y 3/2 and 3/1-2/2). Faint to very faint smooth laminations; rare
		fine loop structures and displacements. Irregular thin
	•	to rare thick shalv parting (common unctuous parting
	•	surfaces); slightly irregular to very backly fracture
	• .	some neutral gray laminaeespecially in upper and lower
n1	1	parts.
Blue mar 1899.6	ker at abou	t 1900 feet on electric log.
1033.0	1900.7	Oil shale: dark brownish gray and brown to some brownish
		black (lulk $3/2$ and $3/3-2/2$, some $1/2$). Very faint to
		faint, smooth to irregular distorted laminations.
•	•	Regular to irregular, thin to thick shaly parting;
		hackly to irregular fracture. Some thin to medium, tan to brownish gray dolomite stringers and bands in lower
		part.

Illustration No. SBR-3891P (Sheet 31 of 57)

Core samples from Equity Oil Company's Oldland Corehole 3--Continued

From	То	Description
	The state of the	bedding in oil shale; distinct medium to thick dolomite
		bands with very distorted and displaced internal lamina-
		tions. Very irregular to slightly irregular, thick to
		some thin parting (some very unctuous parting surfaces);
•		irregular to hackly fracture. Common irregular natural
		fractures in dolomite bands with some buff silky spots
		(like 1894.0 feet).
		Sample of brownish gray to tan dolomite band from
		1909.2 feet:
1910.0	1911.5	X-ray - dolomite; some quartz, feldspar (Na and K).
1910.0	1911.3	Oil shale: dark brownish gray to brownish black (10YR
2.0		2/2-1/2, rare 3/2-3/1). Very faint slightly distorted
		to very smooth laminations and streaked bedding.
		Regular to some very irregular, thick to rare thin shalv
		parting; slightly irregular to very irregular hackly
		fracture. Rare very fine vitreous black streaks.
		Very rare very small black cherty blebs. Very rare
		fish bones.
911.5	1912.6	Dolomite and oil shale: brownish gray to tan dolomite
		(10YR 4/2-6/2 and 6/3) and dark brownish gray to
		brownish black oil abole (1000 2/2 1/2)
		brownish black oil shale (10YR 3/2-1/2). Distinct thin
		to thick laminae and bands of dolomite with very dis-
		torted and broken laminations and stringers; thin to
		medium laminae and bands of oil shale with very faint
-		smooth to distorted streaked bedding. Regular to very
		irregular, thick to medium parting; irregular fracture.
		Some natural fractures with buff silky spots and rare
		bitumen stains.
1912.6	1913.7	Oil shale: medium brownish gray and brown to brownish
		black (10YR and 2.5Y 4/2 and 4/3-1/2). Very faint to
100		rare moderately distinct, smooth to distorted lamina-
	•	tions and streaked bedding; rare irregular loop
		structures. Regular to very irregular, medium to thin
		parting haddy to imposite front and a st
		parting; hackly to irregular fracture. Some fine brown
012 7	1010 0	crystalline streaks and blebs in lower part.
913.7	1918.0	Oil shale: dark and rare medium brownish gray (2.5Y
		3/2-2/2, rare $3/1-5/1$). Very faint to faint, smooth
* .		to slightly distorted and displaced laminations.
		Slightly irregular to very irregular, medium to thin
		parting (very unctuous parting surfaces); irregular to
		hackly fracture. Some black fish bones on parting
		surfaces in upper part. Some neutral gray laminae in
		lower part. A thin dense buff dolomite band and a thin
		dense to slightly prismatic brown to gray calcite band
1 4		in lower part. Very badly broken up; true length doubtfu
		THE LOWEL PAIL. VERY DAGLY Droken up: true length doubtfu

Illustration No. SBR-3891P (Sheet 33 of 57)

Core samples from Equity Oil Company's Oldland Corehole 3--Continued

From	То	Description
		conchaidal fracture D 1
		conchoidal fracture. Rare brownish gray to buff
		dolomite bands. Very rare irregular glossy shear
		surfaces. Very badly broken up and mixed up; true length doubtful.
1933 7	1946.0	
1755.1	1740.0	Silicic marlstone: medium to dark gray (4-3N) and
		some medium to dark brownish gray (2.5Y 4/2 and 4/1-
		2/2). Moderately distinct to faint, smooth to some
		distorted laminations and bands. Rare brownish gray
		to buff dolomite bands. Very badly shattered and
1946.0	1955.0	mixed up; true length very doubtful.
1940.0	1933.0	Silicic marlstone: dark to medium gray (3-4N) and
		some dark brownish gray $(2.5Y 3/1)$ and $3/2-2/2Y$
		Faint very smooth laminations and some bands. Regular
		to some very irregular, thick to thin parting (unctuous)
	•	concliditat to irregular fracture. Very rare thin dence
		light brownish gray dolomite bands. Lower part were
		badly broken up and mixed up; true length doubtful
		Sample of gray silicic maristone from 1946 & feet.
		x-ray - illite, quartz; some dolomite, calcite.
1055.0	1066.0	reldspar (K and Na), pyrite
1955.0	1964.0	Silicic marlstone: dark to medium gray (3-4N, rare 5N),
* •,		and some dark to medium brownish grav (2.5y 2/2-4/2 and
		4/1). Faint to rare moderately distinct very smooth
		laminations. Regular to very irregular medium to
		thin parting (unctuous); very irregular to conchoidal
		rracture. A thick contorted and broken dense brownish
		gray dolomite band at 1956.8 feet: a thick smooth dense
		right prownish gray dolomite band at 1958 0 feet Tower
		part very badly shattered and mixed up: true length
		very doubtful.
		Sample of dense massive dolomite band from 1958.0
	•	reet:
1061.0	1066.0	X-ray - dolomite.
1964.0	1966.0	Oil shale and silicic marlstone: dark to medium brownish
		gray $(2.51 2/2-4/2)$ and $(4/1)$ and medium to light gray
	•	(4-6N). Faint smooth to some slightly distorted and
		displaced laminations and rare bands. Very irregular to
		some regular, medium to thin parting (unctuous): very
		regular to hackly fracture. Rare glossy shear surfaces
		with slickensides. Very rare fine irregular pyrite
		stringers.
		and the contract of the contra

Illustration No. SBR-3891P (Sheet 35 of 57)

Core samples from Equity Oil Company's Oldland Corehole 3--Continued

From	То	Description
1975.4	1977.1	Oil shale: dark to medium brownish gray (2.5Y 3/2-4/2 and 4/1, rare 10YR 5/2-5/3). Very faint to faint,
		smooth and rare distorted laminations. Regular to very irregular, medium to thin parting (unctuous); irregular
		to hackly fracture. Some gray laminae. A 3/4-inch dense brownish gray fractured dolomite band in lower
1077 1	1978.5	Parc.
19//.1	1978.5	Oil shale and marlstone: dark to some medium brownish gray oil shale (2.5Y and 10YR 2/1-3/2, some 4/2-5/2) and medium to light brownish gray marlstone (10YR 5/2-6/2)
	• • •	and displaced to fairly smooth laminations stringers
		to massive fractured marlstone bands. Tracellar to
•		irregular to hackly fracture. Rare very thin irregular
1978.5	1979.5	gray stringers. Oil shale: dark brownish gray (10YR 2/2-3/2). Faint
		single of the surface
		Resolut to some lifegular, thin to thick abole manifest
		(Some directions); nackly to slightly irrogular from
		mile then to time dense dark prown crystalling atmin
		bome very true pyrite Streaks in lower name A his
		dark brownish aray dolomite band with some characters
•		bitumen-coated vertical fractures at 1979.2 feet.
		Sample of normal dark brownish gray oil shale from 1978.8 feet:
•		
1979.5	1980.5	X-ray - illite, quartz; some Na-feldspar, dolomite, pyrite. Oil shale: dark brownish and (1000)
		Oil shale: dark brownish gray (10YR and 2.5Y 2/2-3/2 and 3/1). Faint very smooth laminations. Very regular to
	•	some irregular, medium to very thin shaly parting (some slightly unctuous); slight hackly to fairly smooth
		fracture. Some very fine silty-textured pyrite streaks and blebs. Very rare glossy shear surfaces with slicken-
1980.5	1982.0	
		Oil shale: dark to medium brownish gray (2.5Y 3/2 and 3/1-4/2 and 4/1; some very slight olive tint); dark brown to
		and in lower 0.5 1000 (101R 3/3-6/3). Faint warm smooth
		laminations in upper part; distinct laminations with common loop structures and displacements in lower 0.3
		very regular to some irregular thin to many
		thick shaly parting; slight hackly to irregular fracture
		bome gray raminae and thin bands in unper part. Para fine
		pyrite streaks. Some short vertical fractures in lower part.
-		
7		

Illustration No. SBR-3891P (Sheet 37 of 57)

Core samples from Equity Oil Company's Oldland Corehole 3--Continued

From	То	Description
		The second secon
		thin parting; irregular fracture. Common small buff
		to white radiating silky spots and some prismatic
1994.4	1005 /	calcite in fractures.
1334.4	1995.4	Oil shale: dark and rare medium brownish gray (10YR
		3/2-2/2, rare 4/2). Faint to very faint smooth
•		laminations. Regular to some irregular, medium to
1995.4	1998.0	thin shaly parting (some unctuous); irregular fracture.
1777.4	1990.0	our share: dark brownish gray to brownish black /2 50
		2/2-1/2, rare 3/2). Very faint very smooth laminations
		very regular to very irregular, thick to medium shalv
		parting; slight hackly to slightly conchoidal fracture
		nate very line pyrite streaks and very rare thin ir
1	•	regular dense prownish black cherty stringers in upper
• ***		part. Very rare very fine buff earthy laminae in lower
1998.0	2003.0	part.
2770.0	2003.0	Oil shale: dark to rare medium brownish gray and
		brownish black (10YR and 2.5Y 3/2 and 3/1-2/2, rare
		4/2-5/2 and 1/2). Very faint to faint very smooth
		laminations. Very regular to some irregular, thick
		to thin shaly parting (some slightly unctuous); slightly
		conchoidal to rare hackly fracture. A very thin smooth
2003.0	2004.0	very pyritic dark olive gray band at 1999.2 feet.
		Oil shale: dark brownish gray to brownish black (2.5Y
	•	3/2 and 3/1-1/2). Faint very smooth laminations.
		Regular to some very irregular, medium to thin shaly
2004.0	2005.0	parting; slightly conchoidal to hackly fracture.
		Oil shale: brownish black to dark brownish gray (2.5Y 1/2-2/2, rare 3/2-3/1). Very faint very slightly
		distorted and displaced to smooth laminations. Slightly
		irregular to very regular, medium to very thin shaly
		parting; hackly to slightly conchoidal fracture. Some
		fossil fragments (bone fragments and rare scales).
2005.0	2006.2	Oil shale: dark brownish gray to some brownish black
		(2.5Y and 10YR 2/2-3/1 and 3/2, some 1/2). Faint
•		smooth to very slightly distorted laminations; some
		fine loop structures and displacements. Regular to
	•	slightly irregular, thin to thick shaly parting;
		singuity irregular to rare very hackly fracture Rare
		very fine pyrite streaks and blebs near base.
2006.2	2008.2	Oil shale and marlstone: medium to dark brownish gray
		and some prownish black oil shale (1008 4/2-2/2 some
		1/4), medium to light brownish grav and tan marletone
		(10YR 5/2-6/2 and 6/3). Faint to moderately distinct,

Illustration No. SBR-3891P (Sheet 39 of 57)

Core samples from Equity Oil Company's Oldland Corehole 3--Continued

From	То	Description
2016.5	2021.0	Oil shale: dark to some medium brownish gray (2.5Y
		2/2-3/2 and $3/1$, some $4/2-4/1$). Very faint to some
		moderately distinct, smooth to irregular, distorted
		and displaced laminations. Regular to very irregular,
		thick to very thin parting (some unctuous); very
		hackly to very irregular fracture. Common dense
		brownish gray dolowite lawings and the dominant and the dolowite lawings are the dolowite lawings and the dolowite lawings are the dolowite lawings and the dolowite lawings are the dolowite lawings are the dolowite law and the dolowite lawings are the dolowite law are the dolowite lawings are th
		brownish gray dolomite laminae and thin bands with
		short vertical fractures some with resinous brown
		coatings and radiating silky spots. Common irregular
	1.14	glossy shear surfaces with slickensides.
*	1.	Sample of interlaminated oil shale and dense
		dolomite from 2017.6 feet:
2021.0	2025 0	X-ray - dolomite; some quartz, illite, pyrite.
	2025.0	Oil shale: brownish black to some medium brownish
•		gray and brown (2.5Y and 10YR 1/2-3/2, some 3/3-4/2
		and 4/3). Very faint to some moderately distinct,
		smooth to irregular distorted laminations and some
		very faint streaked bedding. Regular to very ir-
		regular, very thin to rare thick parting; very hackly
*		to very irregular and rare fairly smooth fracture
		Some thin to rare thick dense, massive to faintly
		Taminated prownish gray fractured dolomite bands
-		Rare very fine silty-textured pyrite streaks and
2025 0	0007 6	small blebs near base.
2025.0	2027.6	Oil shale: brownish black to dark brownish gray (10YR
**************************************		1/2-2/2/; some very slight satiny luster. Very faint
		very smooth to some slightly distorted and broadly
		curved laminations and streaked bedding. Very regular
	•	and some smoothly curved to rare very irregular thick
		to thin shally parting; very hackly to irregular and
		rare fairly smooth fracture. Very rare fine purite
•	•	streams and blebs. Some thin to thick (up to 2-1/2
		inches) irregular very dense dark brownish gray dolomite
1 1		pands with resinous to vitreous black bitumen-coated
		fractures in lower part.
		Sample of very thick dense dolomite band from
		2027.5 feet:
000		X-ray - dolomite.
2027.6	2029.6	Oil shale: brownish black to dark brownish gray and
		prown (101R 1/2-3/2 and 3/3). Very faint slightly
		distorted laminations and streaked bedding, some loop
		structures. Very regular to some irregular, medium to
-		and an analysis to

Illustration No. SBR-3891P (Sheet 41 of 57)

Laramie Petroleum Research Center, Laramie, Wyoming

May 12, 1965

Core samples from Equity Oil Company's Oldland Corehole 3--Continued

From	То	Description
2040.1	2041.7	Oil shale: brownish black to dark brownish gray (10YR
		and Z.JI I/2-2/2, Tare 3/2); some very slight entire
		ruster. Very Taint Smooth to some distorted lamine
	•	tions and streaked bedding. Very regular to some
		rilegular, medium to thick shalv parting, elightly
		rilegular to very nackly fracture. Some very fine
		dark brownish gray pyritic streaks and stringers.
2041.7	2043.9	Very rare thin vitreous black organic streaks.
	2045.9	Oil shale: dark to some medium brownish gray and
		brownish black (10YR 3/2-2/2, some 4/2 and 1/2); rare
		buckly fusite, very raint to taint constitution
		and bome bands. They have to require this to
		Parting, control al to irregular and some had-la-
		fracture. Some very irregular fine bitumen-stained fractures in lower part.
2043.9	2046.2	Oil shale, down have t
		Oil shale: dark brownish gray and some brownish black
		(10YR and 2.5Y 2/2-3/2, some 1/2 upper part). Very
		faint smooth laminations and streaked bedding. Very
		regular to slightly irregular, very thin to medium
		shaly parting; hackly to slightly conchoidal fracture.
		A thin tan to brownish gray silty stringer at 2044.3 feet.
2046.2	2050.0	Oil shale dark brownish and to me at
		faint smooth and rare distorted laminations and
		streaked bedding. Regular to some irregular, thick
		to rare thin shaly parting; irregular hackly to some
		fairly smooth fracture. Rare gray laminae and thin
		bands. Brown to tan (2.5Y 4/3-6/4) dolomite in upper
		0.3 foot. Some fine pebbly parting surfaces (ostracods?)
		Sample of dolomite from 2046.3 feet:
	•.	X-ray - dolomite.
2050.0	2052.0	Oil shale: dark to medium brownish gray (10YR and 2.5Y
		3/2-4/2, some 2/2). Very faint smooth laminations and
		streaked bedding. Regular to rare irregular thick to
		medium shaly parting; irregular to very slight fine
		hackly fracture. Very common ostracods on parting
		surfaces. Some thin prismatic calcite streaks and
		fracture fillingsespecially in upper part.
052.0	2054.1	Oli Shale: prownish black to dark brownish once (1000)
		1/2-3/2), some dark to medium brown (10YR 3/3-5/3) at
		2053.1 to 2053.3 feet. Very faint and rare moderately
		distinct, smooth to slightly irregular, distorted and
		, alseorted and

Illustration No. SBR-3891P (Sheet 43 of 57)

Core samples from Equity Oil Company's Oldland Corehole 3--Continued

From	То	Description
		Some irregular thick to many this
		some irregular, thick to rare thin parting; slightly
		irregular to hackly fracture. Rare fine pyrite streaks
		and blebs. Rare irregular glossy shear surfaces in lower part.
2069.2	2070.6	
		Oil shale: dark to medium brownish gray and brown (10YR
•		3/2 and 3/3-4/2, rare 2/2); some resinous to waxy
		streaks near top. Very faint slightly distorted to
		smooth laminations and streaked bedding; rare small
		loop structures. Slightly irregular to irregular,
		thick to medium parting; irregular to conchoidal
		fracture. Some thin black streaks with fine columnar
2070.6	2073.7	pyrite seams and fine adamantine crystals in lower part.
	20/0,1	Oil shale: dark brownish gray and some brownish black
		(10YR 3/2-2/2, some 1/2), some resinous to waxy luster
		in middle part. Very faint smooth to some distorted
		laminations and streaked bedding; common small to
		fairly large loop structures in middle part. Regular
		to some irregular, thick to thin shaly and rare papery
		parting, very hackly to slight hackly fracture. Some
		very fine brown crystalline streaks and stringers.
4		Very rare thin black streaks and stringersone near
		top with columnar pyrite. Middle part is very elastic and tough.
2073.7	2076.0	
-0,5,7	2070.0	Oil shale: dark brownish gray, rare brownish black near
	•	top (10YR and 2.5Y 2/2-3/2, rare 1/2). Very faint
		distorted to smooth laminations and streaked bedding;
		some small loop structures near top. Regular to very
		irregular, medium to thin parting (some unctuous part-
		ing surfaces); irregular to very hackly fracture. A
		very irregular 3/4- to 1-1/2-inch pale yellowish-buff
	•	to brownish gray, earthy to fine sandy-textured stringer
	-	at top (some fine stringers in shale above and below).
		A 0.3-foot faintly bedded to dense massive dark brownish
	•	gray dolomite band at 2074.8 to 2075.1 feet (some ir-
		regular fractures with white radiating silky spots like 1894.0 feet).
		1094.0 leet).
		Sample of brownish gray silty to sandy material
		from irregular stringer from 2073.7 feet;
		X-ray - dolomite, mixed layer clay, some dawsonite.
		Sample of yellowish buff earthy material from ir-
	·	regular stringer from 2073.8 feet:
		X-ray - mixed layer clay.
-		

Illustration No. SBR-3891P (Sheet 45 of 57)

Core samples from Equity Oil Company's Oldland Corehole 3--Continued

From	То	Description
2096.5	2098.0	Oil shale: brownish black to dark brownish grow (1000)
		Oil shale: brownish black to dark brownish gray (10YR 1/2-3/2 and 3/1). Very faint to faint smooth to
		slightly distorted laminations and a supplied to
		slightly distorted laminations and some streaked bedding. Very regular to some irregular, medium to thin shaly
		Darring, clichtin isomografian to 1 11 d
		fine gray laminae and rose thin law is
		fine gray laminae and rare thin brownish gray to tan dolomite bands in lower part.
2098.0	2102.8	Oil shale: dark to modium homerical
		Oil shale: dark to medium brownish gray and rare
		brownish black (10YR 2/2-5/2 and 5/1, rare 1/2). Very
		faint to some distinct, slightly distorted and displaced
		to smooth laminations and streaked bedding. Regular
		to very irregular, thick to thin parting; hackly to
		very irregular fracture. Common brownish gray to tan
		dolomite laminae and thin bands with short vertical
•		fractures in upper part. Lower part very badly broken
2102.8	2223.0	up and mixed up; true length doubtful. Missing.
2223.0	2225.0	
	2225.0	Oil shale: brownish black to dark brownish gray (10YR
	•	1/2-2/2, some 2/1). Very faint smooth to some slightly
		distorted streaked bedding. Regular to some irregular,
		thick to thin shaly parting; coarse hackly fracture.
•		Rare thin dense dark brownish gray dolomite stringers and lenses.
		Sample of brownish black oil shale from 2223.2 feet:
		X-ray - illite, quartz; some ferroan, Na-feldspar,
Orange	marker at	dolomite. about 2225 feet on electric log.
2225.0	2228.0	Oil shalo, dark harmid
	2220.0	Oil shale: dark brownish gray (10YR 2/2-3/2). Very
		faint distorted streaked bedding. Slightly irregular
		to very irregular, thick to medium and rare thin part-
		ing; irregular hackly to some smooth fracture. Very
	•	rare very small brown crystalline blebs. Some irregular
2 228 0	2231.0	fractures with silty-textured pyrite crusts in upper part.
2220.0	2231.0	Oil shale: brownish black to dark brownish gray (10YR
		1/2-2/2). Very faint smooth to some distorted streaked
		bedding. Regular to some very irregular, thick to thin
		shaly parting; irregular coarse hackly fracture. Some
		very fine pyrite blebs in lower part. Rare very glossy
		shear surfaces with slickensides. Lower part badly
2231.0	2243.0	broken up; true length doubtful.
44JL,U	445.U	Mudstone (?): dark to medium brownish gray (2.5Y 3/1-4/1;
		some almost neutral gray). Very faintly hedded to massive
		very irregular to some very regular, thick to thin part-
		ing; irregular to very conchoidal fracture. Rare black
	•	prant rossils on parting surfaces. Very badly broken up
		and mixed up; true length very doubtful.
	and the second section of the second	

Illustration No. SDR-3891P (Sheet 47 of 57)

Core samples from Equity Oil Company's Oldland Corehole 3--Continued

From	То	Description
2288.5	2290.5	Oil shalo, brownish block and an all a co
	2250.5	Oil shale: brownish black and some dark brownish gray
		(10YR 1/2, some 2/2); common sating luster. Very
		faint smooth streaked bedding. Slightly irregular to
		irregular, thick to medium parting; irregular to hackly fracture.
2290.5	2293.0	
2270.5	2275.0	deal of promitting processing
		2/2-1/2). Very faint very distorted to smooth streaked
		bedding. Very irregular to some slightly irregular,
		thick to medium parting; very irregular to coarse hackly
		fracture. Some very irregular to vermiform fine pyrite
		stringers and rare bitumen coated fractures in upper
•		half. Some parts badly broken up and mixed up; true
2293.0	2295.0	length doubtful.
2293.0	2293.0	Oil shale: dark to some medium brownish gray (10YR
		2/2-3/2, some 4/2 lower part). Very faint smooth
		streaked bedding. Irregular thick to medium parting;
	•	irregular fracture. Rare fine brownish gray silty-
3:20 E 0	2200 0	textured crystalline streaks in lower part.
2295.0	2299.0	Oil shale: dark brownish gray and some brownish black
		(10YR 2/2, some 1/2). Very faint smooth and some
		slightly distorted streaked bedding. Regular to some
		irregular, thick to rare thin shaly parting; irregular
		to hackly fracture. Some very thin irregular to vermi-
		form olive gray pyritic stringers. Rare thin dark olive
		gray to brownish gray silty-textured crystalline
		stringer's.
		Sample of oil shale with silty-textured stringers
		from 2297.2 feet:
•		X-ray - analcite, quartz, Na-feldspar, pyrite,
		dolomite, ferroan?
•	•	Sample of dark brownish gray to brownish black oil
	•	shale with thick parting and irregular fracture
		from 2297.7 feet:
•		X-ray - illite, quartz, dolomite, Na-feldspar, ferroan.
2299.0	2301.0	Oil shale: dark brownish gray (10YR and 2.5Y 2/2).
		very faint smooth streaked bedding. Slightly irregular to very irregular, very thin to rare medium shaly parting;
		very hackly fracture. Some very irregular fine olive
		gray silty-textured pyrite stringers near top.
		Sample of oil shale with warm this are to
		Sample of oil shale with very thin parting and . hackly fracture from 2300.9 feet:
		X-ray - illite, quartz; some dolomite, ferroan,
		feldspar.
		remoper.

Illustration No. SBR-3891P (Sheet 49 of 57)

Core samples from Equity Oil Company's Oldland Corehole 3--Continued

From	То	Description
2313.0	2314.0	Oil shale: dark brownish gray (10YR 2/2 and 2/1-3/2). Very faint smooth to distorted laminations and streaked
		bedding. Very irregular medium to thick parting: ir-
		regular to conchoidal fracture. Some thin to medium dense brownish gray dolomite stringers and bands. Some very glossy shear surfaces.
2314.0	2315.5	Oil shale: dark brownish gray (10YR 3/2-3/1). Very
		faint smooth streaked bedding. Regular to irregular,
		thin to some medium shaly parting; irregular to hackly
* . **		fracture. Some very small waxy black organic lenses near base.
2315.5	2317.0	Oil shale: dark brownish gray (10YR 3/2 and 3/1-2/2 and 2/1). Very faint distorted to some smooth streaked
		bedding. Very irregular to some regular, thick to thin parting; very irregular to some hackly fracture. Some
		thick dense medium to dark brownish gray dolomite bands. Rare glossy shear surfaces. A very irregular thick
		dark olive gray to neutral gray, silty to dense band with
		contorted oil shale stringers and some very fine pyrite
	•	at base (strong oil stains on outside of core).
		Sample of dense gray material with some oil shale from 2315.9 feet:
2317.0	2317.8	X-ray - quartz, analcite; some ferroan, Na-feldspar. Oil shale: dark brownish gray (10YR and 2.5Y 3/1-3/2).
		Very faint distorted to smooth streaked bedding. Tr-
	•	regular to regular, thick to very thin parting: irregular
2317.8	2319.0	to very hackly fracture.
2317.0	2313.0	Oil shale: dark and rare medium brownish gray (10YR 2/2-3/2, rare 4/2). Very faint smooth and some distorted
		streaked bedding. Irregular to slightly irregular, thick
	•	to rare thin parting; irregular fracture. A very distinct thin irregular yellow-buff (2.5Y 7/3-8/3) silty-textured
	• •	stringer at 2318.5 feet with some fine brownish gray
		stringers extending into shale below. Some very small
		dull black organic lenses near base. Most of section is very dense and heavy.
		Sample of yellow-buff stringer from 2318.5 feet:
•		X-ray - ferroan, mixed layer clay; some feldspar (Na and K), kaolin
		Sample of dense heavy oil shale from 2318.8 feet:
		X-ray - dolomite, quartz; some illite, feldspar,
		pyrite.

Illustration No. SBR-3891P (Sheet 51 of 57)

Core samples from Equity Oil Company's Oldland Corehole 3--Continued

	Description
2337.8 2340.4	Oil shale: dark brownish gray (10YR and 2.5Y 3/2 and 3/1-2/2). Very faint smooth to slightly distorted streaked bedding. Slightly irregular to very irregular very thin to some thick parting; sharp hackly to very irregular fracture. Some black fossil fragments on parting surfaces near top (fish ribs and spines?).
2340.4 2346.0	distinct slickensides. Some thick dense massive gray to brownish gray dolomite bands in lower part. Some parts badly broken up and probably mixed up; true length doubtful. Oil shale: medium to dark brownish gray (2.5% A/1 2/1)
	to smooth streaked bedding. Slightly irregular to very irregular, very thin to medium parting (some very unctuous); very irregular to very backly fractions.
	very irregular fine gray silty stringers at about 2341. feet. A thick dense massive brownish gray dolomite band at 2342.4 feet. Very badly broken up and mixed
2346.0 2347.0	oil shale: medium to dark brownish gray (10YR 4/1-2/1 and 2/2). Very faint smooth to slightly distorted streaked bedding. Regular to slightly irregular, medium to thin shaly parting: irregular to slight
2347.0 2348.0	oil shale: dark brownish gray to brownish black (10YR 2/1-1/1; almost neutral). Very faint smooth to align.
•	distorted streaked bedding. Very regular to slightly irregular, thin to rare thick shaly parting; slightly irregular to some irregular coarse hackly fracture. Rare very fine silty-textured pyrite streaks.
2348.0 2349.0	Very faint smooth to some distorted streaked bedding. Regular to irregular, thin to medium parting (some unctuous); hackly to irregular fracture. Some black fossil fragments on parting surfaces.
349.0 2350.0	medium, massive to faintly bedded brownish gray dolomite stringers and bands. Dolomite: medium to dark brownish gray (10YR 4/1-3/1); massive and very dense. Conchoidal fracture; some very irregular oil-stained vertical fractures. Some thin zones of dark brownish gray papery shale with some small irregular patches of silty-textured pyrite on parting

Illustration No. SBR-3891P (Sheet 53 of 57)

Core samples from Equity Oil Company's Oldland Corehole 3--Company

From	То	Description
2361.0	2365.0	Oil shale: dark brownish gray (10YR and 2.5Y 3/2 and 3/1-
		2/2). Very faintly bedded. Irregular thin shaly to papery parting (unctuous); very hackly fracture. Rare
		fish scales and silty-textured pyrite patches on part- ing surfaces. A 0.1-foot dense faintly laminated dolomite band at base.
2365.0	2366.0	Oil shale: dark brownish gray and some brownish black (10YR 2/2-3/2, some 1/2). Very faint smooth streaked bedding and rare faint distorted laminations. Regular to irregular, thin to thick parting; slight hackly to
		irregular fracture. Common fine pyrite streaks and blebs near top. Some fossil fragments in upper part. Some glossy shear surfaces in lower part.
2366.0	2378.5	Oil shale: dark brownish gray (10YR 3/2 and 3/1-2/2 and 2/1). Very faint smooth to some very distorted streaked
		bedding. Irregular papery to some thick parting; very hackly to very irregular fracture. Some thick dense massive dolomite bands with oil stained fractures. Some
		very irregular fine to thin, gray to brown silty streaks and stringers. Some parts very badly broken up and mixed up; true length doubtful.
		Sample of oil shale with very irregular gray silty- textured stringers from 2369.5 feet:
2270 5	0200 1	X-ray - quartz; some dolomite, pyrite, ferroan, feldspar (K and Na).
2378.5	2380.1	Siltstone and fine sandstone: light gray (7-5.5N; some very slight brown tint); dolomitic. Very faint distorted to smooth streaks and stringers; some massive. Irregular parting and fracture. Interfingering contacts
		at top and bottom.
	•	Sample of fine-grained sandstone from 2379.5 feet: X-ray - quartz; some dolomite, feldspar (Na and K).
2380.1	2381.3	Oil shale: dark brownish gray (10YR 3/2-2/2). Very faint very distorted streaked bedding. Very irregular to some slightly irregular, thick to thin parting; irregular to coarse hackly fracture. Some very irregular siltstone injections near top and bottom. Some irregular
2381.3	2382.7	glossy shear surfaces. Siltstone and fine sandstone: light to medium gray (6.5-4.5N; some dirty brown stains). Mottled; some gray to brownish gray contorted mudstone stringers. Irregular parting and fracture.
-		

Illustration No. SBR-3891P (Sheet 55 of 57)

Core samples from Equity 0il Company's Oldland Corehole 3--Continued

From To

Description

2393.6 2395.0

Oil shale: dark brownish gray (2.5Y and 10YR 2/1-2/2). Very faint smooth to slightly distorted streaked bedding. Very regular to very irregular, medium to thin parting; irregular and rare slight hackly fracture. Some thin irregular medium brownish gray "injected" stringers in upper part. Lower part very badly broken up and mixed up; true length doubtful.

Sample of dark brownish gray oil shale with regular shaly parting from 2394.1 feet:

X-ray - illite, quartz; some pyrite, feldspar, dolomite.

Bottom of core.

Illustration No. SBR-3891P (Sheet 57 of 57)